

THE AMERICAN FARMER:

DEVOTED TO
AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.
[FIFTH SERIES.]

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." Virg.

Vol. I.

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JUNE.

"She hovers around us at twilight hour
When her presence is felt with the deepest power;
She mellows the landscape, and crowds the stream
With shadows that flit like a fairy dream :—
Still wheeling her flight through the glad some air,
The *Spirit of Beauty* is everywhere!"

June is our month of beauty, and the "Spirit of beauty" is truly everywhere. On the mountain and in the valley, in the wood and in the field, she ministers with unsparing hand. Happy are they who love her sweet influence, and by gentle arts draw her to their homes, and constrain her to dwell with them.

WORK FOR THE MONTH.

CORN CROP.

The cultivation of this crop, if our advice has been followed up to this time, should be completed before wheat harvest, and laid by then, light and clean. Good management consists in working quickly, destroying grass before it takes strong hold of the ground, and finishing the cultivation before the roots are wanted for the formation of the grain. Let the young cultivator beware of getting "in the grass" if he would get a full crop. Long spells of wet weather render him liable to this, and his only safety is in keeping his cultivation in advance of the grass when it is dry.

TOBACCO.

The important work of getting the crop set is to be done in this month. Failing of a good stand, the whole season is lost, and the cultivator should use the utmost diligence to secure it at the earliest period. If plants are abundant, you will find it desirable to take advantage of any "season" that may occur to set out even small plants for the sake of getting forward with the work. Otherwise there is little gained by

too great haste in planting. A large, well rooted plant has many more chances of living than a small one, and has the material advantage of growing off much more quickly after planting.

Much care should be used with the plant beds, if you would ensure their lasting to the end of a protracted planting time. It injures the beds to draw them too closely in the beginning. The first drawing should take out only such plants as are of full size, or stand too thickly. See that the beds are not carelessly trampled and trod upon. Pick and top dress after the first drawing, and if it has been judiciously drawn, they will improve and grow very rapidly.

All diligence must be now used in the preparation of the ground for planting. It would show very bad management to lose a planting season now for lack of this. If the land has been ploughed early in the season, as directed heretofore, there can be no difficulty in getting it in proper condition now.

Much care should be used in drawing the plants, that they be not mashed and bruised or have their roots broken, and it is greatly better to take them to the ground in baskets, than to tumble them into the body of a cart.

An even stand is especially desirable, and for this reason more attention should be paid to having the plants of uniform size in the same lot of ground. Great attention should be paid to the proper setting of the plants to secure a stand. There is frequently much emulation among spirited hands in planting. Any thing like racing should be prohibited, as the slower ones who take part in it are sure to do their work badly; opening the hill imperfectly and doubling up the root, or bruising the plant.

As early as possible after the plant is rooted in the hill, the first weeding should be done; scraping away the surface earth very carefully from

around the young plant, and picking away the least sprig of grass from about it. This is an important working, and should be done with much care. Never allow the grass to get the start of you here.

POTATOES.

This is the month for planting the main crop of Potatoes. An old farmer says, plant on the longest day of the year. It is none too late. If a large crop is to be planted, we would begin sooner. If not already done, plough your sward early, and have it in good order by harrowing and rolling. Well rolled stable manure or compost or Peruvian Guano at the rate of 300 bushels to the acre are the best manure. Cut the potatoes a week or more before planting, so that those cut may have time to heal over. Do not allow them to be exposed any length of time in the sun when about to plant. If the weather be hot and dry, open the furrow, drop the potato and cover with the plough without delay. This will ensure the coming up regularly if the seed be good. As soon as the first plants show themselves above ground, run a harrow both ways, to break the crust and destroy the young grass.

HAY MAKING.

Clover and Orchard Grass will be fit for hay this month. There are many and somewhat various signs relied upon to indicate the proper time of cutting. The bees are said, on good authority, to be the safest guides, as they seek the sugar, and it is when this is most abundant that the grass is in best condition for hay. Clover is usually cut when a portion of the blossoms have turned brown. Orchard Grass when the bloom is well out. We copy an extract on the subject of curing, which it is well the hay-maker should read every year:

The water contained in green clover hay when first cut, amounts to from seventy-five to eighty-three per cent. It also contains a certain amount of sugar, which is easily fermented. Therefore, when cut and placed uncured in a barn or stack, fermentation will be produced, which will destroy the sugar and other nutritive qualities, and vinegar or acid will be produced, rendering the hay sour and unfit for food. If sufficiently dried, the sugar will remain with the fibre, and the hay will be a nutritious, wholesome food for stock, and supply the animals with not only food, but an element, carbon, which will generate animal heat.

The whole plant contains 11.18 per cent. of ashes; the leaves 10.69 per cent. and the stems 8.52 per cent. All of the ingredients have more or less of valuable properties to support the animal economy. The leaves contain nearly one-fourth part more than the stem alone. They should be carefully preserved. This can only be done by carefully drying the clover before putting it into the barn. The clover may be cut, and permitted to lay in the swarth a few hours to wilt. Let it

then be carefully put up into bunches to remain a few days, to cure and partly dry. When it is desired to house it, let the bunches be open and exposed to the air a few hours, and it is then fit to go to the barn. A little salt may be scattered broadcast over the layers. Never let the hay dry so much in the field as to have the leaves or heads drop off by handling or hauling.

HAY CAPS.

Hay caps have become fashionable north of us within a few years past, and are said to be very serviceable in protecting the cured hay from sudden or protracted rain. We copy here the experience of a farmer, as told in the *Country Gentleman*:

Three years ago I made one hundred caps, one and a half yards square, of heavy cotton cloth.—They were made by sewing half a breadth to a whole one of the desired length. To fasten them on, I first tied stones in the corners, but they would blow off, and were ugly things to handle—then I sewed strong twine to the corners, with pegs attached, but in high winds the corners would pull or tear out after a while. Finally I tied a knot in the corners, leaving the end sticking out about an inch, so as not to slip or untie, and fastened the cord by tying it back of the knot, and found this to work well. The strain then comes upon the whole corner, and not upon a small section, as when sewed on. There is a little knack in putting caps on so that they will "stay put." The pegs should not be run straight into the cock, but *pointing up* at an angle of about forty-five degrees; then the working of the cap by the wind will not draw them out; and the cap should be drawn down snug when the last two pegs are put in. If thus put on, not one in a hundred will get loose, and the cock cannot blow over.

But my hay caps called forth various and often ludicrous remarks, when first brought into the field—many looked askance at them, and thought it useless to "blanket" hay, besides any "gump" might know that water would run through cotton cloth. One individual who first saw them at a distance, and really did not know what they were, (they were all in use in one field,) concluded it was the encampment of a general muster, or of an invading army—didn't know which. However, I was so well pleased with them, that I added fifty to the number the next season, and also made two twelve feet square, to cover stacks, and think the money well invested.

WHEAT HARVEST.

Make your preparations in due time for Wheat Harvest. The chief one is the earnest pressing forward with the general farm work, so that, when you must go into the grain field, not a sprig of grass may be left to luxuriate where your corn and tobacco are growing. Employ at once, such extra labour as you may need for harvest. Provide yourself a good reaper *now*, from among the excellent ones advertised in the *Farmer*, or if you rely still on the cradle, have all in readiness, that no time be lost.

As to time of cutting, we say as we have always said, watch carefully the progress of your crop and be in readiness to start promptly when it is ready for you. It is a dangerous error which advises a young farmer to begin cutting, in this climate, two weeks before the wheat is ripe. But it ripens very suddenly sometimes, and should be cut at the earliest possible time after the danger from shrinking is passed. Loss in quality and quantity is the result of too much delay.

HUNGARIAN GRASS OR MILLET.

These should be sown now, the earlier the better. Bear in mind that they make a heavy draft on short notice, upon the soil, which should be well supplied with funds to meet their demand. Otherwise expect a failure.

BROADCAST CORN AND SUGAR MILLET.

Do not delay to sow these longer, for supply of green food.

FIELD PEAS.

The Black, Clay, Black-eyed, or any of the Field Peas should be planted early this month if ripe seed are wanted.

RUTA BAGA.

Plough by the last of the month the ground in which Ruta Baga is to be sown, but do not sow before middle of July.

THE VEGETABLE GARDEN.

JUNE.

The chief work for the Garden this month, is to keep the grass from the young plants, and the ground light.

CUCUMBERS AND MELONS.

Keep these carefully cleaned out, and draw the earth gently to the stems.

CABBAGES.

Plant out main crop of these towards the last of this month, and keep those already planted well worked. When intended only for family use they may be planted as late as the middle of July, and may occupy spaces between the early peas, or other vegetables to come off the ground.

CELERY.

It is rather early to plant out Celery in this month for principal crop, but a portion of the crop may be planted. Make the trenches full three feet apart and about a spade deep; laying out the earth on each side of the trench. Put in about three inches of well made compost or thoroughly rotted manure and mix it up well with an inch or two of the earth at the bottom of the trench, and then set your plants. Plant along the centre of the trench about six inches from

plant to plant. Trim your plants before setting, cutting back the long leaves to about six inches. Trim off also the long roots to about four inches. Water well after planting, and shade with boards or bushes until the plants begin to grow.

ASPARAGUS BEDS.

Keep your seedling beds entirely clear of weeds, if you would have good plants; also the old beds now going to seed.

KIDNEY BEANS.

Sow successive crops of Kidney Beans several times during the month. Earth up those planted last month.

CAROLINA AND LIMA BEANS.

See that these are well supported with poles. Keep them clean and draw the earth a little to them in working.

BEETS, CARROTS, PARSNIPS, &c.

Thin these out properly as directed last month, and keep them clean and well worked. Beets bear transplanting very well, so that in thinning vacancies may be filled.

TURNIP.

Turnips sown heretofore should be thinned and worked, and a few more sown for family supply.

TOMATO AND EGG PLANT.

Plant out full crops of these if not already done, and tend them carefully while young. Tomatoes should have brush around them to protect the fruit from the ground, or should be supported by stakes. We have seen them very well supported by just such sticks as are used for peas, and in the same way.

RED PEPPERS.

Set out your plants of these early this month for general crop.

GARDEN HERBS.

Plant out now, young plants of Thyme, Savory, Hyssop, Marjorum, &c.

Cut off Lavender, Balm, Sage, &c. for preservation, when they begin to come into blossom, and lay them in the shade to dry.

TRAINING LIMA BEANS.—A Baltimore correspondent of the *Gardener's Monthly* says that though the following is but a small hint, yet by it Lima beans may be gathered full two weeks before the usual time, and so, perhaps, may be useful. Instead of having long and stout poles only as is usual, I tie on lateral slender rods with a willow band, horizontally and so train the vines, much in fact as you would do a grape vine. It takes but a few minutes to give my small plot of plants a tendency to run on the lateral poles, and I am well rewarded by their extra earliness. I cannot explain why they should be earlier than when they run on upright poles; but such is the fact, and you may have it for what it is worth.

FRUIT GARDEN AND ORCHARD.

STRAWBERRIES.

Your Strawberries while bearing will be much benefitted by frequent watering, should the weather be dry. If new beds are to be made for bearing next year, the sooner the better, provided you can have a favorable season for transplanting. Otherwise it is advised to transplant the runner-plants into a shaded border, where they can be protected and watered, and put them into their permanent beds in September.

THINNING FRUIT.

The work of thinning the fruit where they are thick upon the trees, should not be too long delayed. Shake gently the trees of Peaches, Plums, Nectarines, &c., if the curculio has been at work, and have all the fruit that falls carefully gathered up and destroyed.

VINEYARD.

It is not advisable to disturb vines at all while in bloom. After the bloom is over and the fruit well set, clear out all weeds and keep the young shoots neatly and carefully tied up as they advance. Tie up young vines of one and two years' growth, and keep entirely clear of grass and weeds.

THE FLOWER GARDEN.

The Flower Garden will now present a beautiful array of bloom, and it is a season of enjoyment rather than of great labour in this department. Still there are many matters requiring attention which the careful florist will not overlook.

SEEDLING PLANTS.

There will be many seedling plants now large enough to go into the borders. Stock-gilly flowers, Wall flowers, Sweet Williams, Canterbury Bells and many others. Water well when planted unless the ground be wet, and if hot, shade if possible until they are rooted.

BULBOUS ROOTS.

Bulbous roots, when thoroughly ripe, should be taken up, dried several weeks, and then packed in dry sand or wrapped separately in paper till time to plant again.

PERENNIAL PLANTS.

Cut off close to the ground the flowering stems of such perennial plants as have finished their bloom, except where you want to save seeds.

DAHLIAS.

If your Dahlias are not all planted, they should be put out now in well manured ground.

FLOWERING SHRUBS.

All flowering shrubs planted out this spring should be watered in dry weather unless you have taken the precaution to mulch them.

THE GREEN HOUSE.

Plants that during the winter occupied the Green House, should now be removed out of doors. Plunge the pots into sand or spent tan, or if these are not to be had, into the ordinary soil of the garden.

CAMELLIAS

Should be placed in a somewhat shaded and sheltered situation. Do not syringe so freely as at other times when the buds are setting.

AZALEAS

Should be constantly watered and the shoots pinched back to give them a compact growth.

ACHIMENES AND PELARGONIUMS

Should be well watered, and the bloom of the latter may be protracted by protection from the sun in the heat of the day.

FUCHSIAS.

Put these into larger pots.

MONTHLY CARNATIONS.

Put into open ground and increase stock by layers.

CINERARIAS AND CHINESE PRIMROSES.

Sow seeds of these.

ROSES,

For winter blooming, should be put in larger pots and plunged in the open ground.

Destruction of Vines by Bugs or Flies.

To the Editor of the American Farmer :

For the benefit of those who, like myself, have at times heretofore been deprived of melons, canteloupes, squashes, &c., by the destruction of the vines by bugs or flies, I would make known to the readers of the *American Farmer* a mode of prevention of such loss, communicated to me by M. T. Goldsborough, Esq., of Talbot county, and practised successfully by him last season. It is simply this: to place around the young vines sticks of wood, the upper part well covered with *gas-tar*—the odor of the *gas-tar* causes the bugs to leave. The same method may be tried with tomato vines, to keep away the worm. This practice, Mr. Goldsborough says, originated in France, and it is simple enough for all to try.

L.

Linseed meal, mixed with scalded corn meal, shorts, or sour milk, is readily eaten by hens, and is found to be a good substitute for animal food and insects.

[For the American Farmer.]

Experiments with Guano, applied in the Proportion of 600 lbs. per Acre.

The following effects appeared, comparing the unmanured plots with those that were manured as above, and in their immediate vicinity:

The total weight of the crop of oats, including the roots, per acre, was forty-five hundred and seventy-four pounds, (viz. 45 cwt. and 74 lbs.) from unmanured part. The manured part, 85 cwt. and 42 lbs.

The grain (including the glume) from the unmanured part weighed 58.67, or nearly fifty-nine bushels, each bushel being thirty pounds. The manured portion yielded one hundred bushels per acre—viz. 100.64.

The straw from unmanured, cwt. 25.48.

The straw from manured, " 52.41.

The average unmanured 46.51 cwt. total.

The average manured 72.10 " "

The average weight of straw... 29.64 " unman'd.

" " " 44.48 " man'd.

The average seed and glume... 33.68 bus. unman'd.

" " " 91.59 " man'd.

Remarks.—This is one of the most important experiments that I have ever made, if the lesson it teaches is appreciated, as follows:

1st. It exhibits the proportion of waste land in all our fields in bold relief; it so far surpasses the usual crop, *even on unmanured parts* of the field, that in my reports of other manures at the same time, I actually made the bushel of oats 40 pounds instead of 30 pounds, as above, fearing that it would appear incredible, exaggerated, or erroneous. As I do not trust to others in any of these operations, and as the whole plant is first weighed, and then the straw and seed separately, with my own hands, any one can detect any error that I have made by comparing the results. The manured plots were staked out at the same time with the unmanured plots, avoiding all chance of difference; moreover, the *best* part of each plot, and the same area exactly, yielded the results given. A frame embracing exactly a square yard was let fall upon the best part of each plot, and all the oats that stood within the frame were gathered on the day before the rest of the field was harvested. The result astounded me as much as the assertion of a perfectly reliable man who said he "saw 225 bushels of corn that were produced on one acre of land."

If these laborious experiments of mine, that have consumed so much time, do nothing else but "show up" the enormous amount of waste land in the best fields, by the ordinary mode of cultivation, then I shall be repaid. "A word to

the wise is sufficient," but fools *do not* learn by experience.

2d. We may learn the proportion of straw to the grain; also the proportion of stubble or roots, estimating the crop of oats grain as about equal to the oats straw, *when it is reaped as usual, (by weight.)*

3d. We may notice the effect of a liberal dressing of guano in improving the crop, and a calculation may be made of the profit by estimating the whole crop as worth 100 cents per cwt. (as I saw oat straw selling by the vessel load at 60 cts. in Philadelphia, last week.)

4th. We may calculate the relative effect on the straw, as compared with the grain. But in the last number of the *Farmer* I see that we are not to have any more of this Elide guano, as "the island is exhausted." The prejudice against soil analysis forbids any reference to this *here*, but I suspect that I am no more *alone* in this respect than was the prophet of old, who was assured that there were a few more left who had not "bowed the knee to public opinion." I am encouraged to hope this, by referring to the transactions of the last National American Scientific Association, that met in Baltimore in 1858.

I have the analysis of this soil, both from the manured and also from the unmanured plots, made by several members of our last senior class at the Laboratory of St. John's College, after their final examination for their diplomas last year. But this paper is already extended beyond the limit I had assigned it, and I must defer until another time some remarks upon the *relative* value of manures, and the popular errors that I referred to in the last number of the *American Farmer*.

DAVID STEWART, M. D.,

*Prof. of Agr. and General Chemistry, &c.,
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APRIL 21, 1860.

PROFITS OF SHEEP RAISING.—J. W. Worchester, of Pittsfield, Lorain county, Ohio, gives the following statement showing how wool-growing pays those who manage it as it should be. "Last season I clipped 250 sheep; the wool sold for \$552. I have sold within the year 74 sheep, which is equal to the number of lambs raised, for \$814, making \$1366. My sheep are of the Spanish Merino breed, and mostly ewes; a few bucks and wethers. I have kept sheep for the last twenty years, and consider it the most profitable business a farmer can engage in." Sam'l Toms, of Elyria, Ohio, says, "I keep on my farm 86 sheep; my sale of wool amounting to \$105; sold 10 fat sheep, \$90; 15 ewes, 1 ram, \$310; 3 ewe lambs, 1 ram, \$105; premiums at National, State and County Fairs, \$410. I have now on hand 80 sheep—my flock is of the pure Southdown and Leicestershire breeds, mostly Southdowns."

Young Orchards.

N. B. Worthington, Esq.

You will greatly oblige some of the subscribers of your valuable journal if you will give some information in regard to the management of young orchards—more particularly about apples. Whether the ground should be cultivated, and how manure should be applied, and what kind is best. By so doing you will greatly oblige,

Yours, truly,

A CONSTANT READER.

Berryville, Va.

Young trees require the same sort of care as other young crops. They must have good soil, thoroughly drained, if not naturally dry, and must be kept constantly cultivated and sufficiently manured. Our "constant readers" all know what is required to make a crop of ten barrels of corn to the acre. In the first place the quality of soil must be pretty good, and it must be very well manured. An orchard to be made profitable must have the same. The ground for such a crop of corn must of course be free from excess of water, so must an orchard be. It must be well ploughed and prepared for corn, so must it be for an orchard. It must be kept stirred and thoroughly clear of grass during its early growth, so must the orchard—bearing in mind that the early growth of an orchard continues through several years.

The proper treatment of an orchard after planting consists, rather in cleanly cultivation and judicious pruning than in a high degree of fertility by extravagant manuring. Peach orchards must be cultivated continually so long as they are expected to bear a crop. For three or four years, hoed crops of almost any sort may be planted between the rows; always adding manure enough to maintain the fertility of the soil at its original capability of ten barrels of corn. After this time no crop should be planted, but the annual cultivation must be just as strictly adhered to. Apples should be treated in the same way during the first years of growth, but will bear crops of grain and grass afterwards, much better than the peach. It is quite doubtful, however, whether anything is gained by dividing the fertility and capacity of the soil between fruit and other crops. To have young fruit trees, of any sort, surrounded by a strong turf during the first years of their growth is too preposterous to be allowed for a moment. We advise those who, through mistaken notions, have young trees so situated now, and cannot have the turf broken this season, to surround each tree with straw or other litter to

the distance of six feet, thick enough to destroy the grass.

As to what sort of manure is best for an orchard, we say again just the sort of manure that will make it bring ten barrels of corn to the acre. This will not be esteemed so scientific an answer as our correspondent probably expected. And if we wished to appear wise rather than do him a service, we should suggest certain specifics, peculiarly adapted, according to chemical analysis, to the growth of apples or peaches, &c. Such recommendations, however, are made either in ignorance of the present state of chemical science, or in a disposition to take advantage of the ignorance of others. Good stable and barn-yard manures are always in order, and lime and wood ashes and ground bones, and the guanoes and superphosphates are all good, yet not under all circumstances. Yet our correspondent may rest assured that such of them as will make his land good for corn will make it good for apple trees.

[For the American Farmer.]

Horse Taming.

Farmers rely upon farm journals for the most of their information, as a general thing, and as a matter of course, humbuggery, practised on them, ought to be exposed where they can see and read it. The country at this time is flooded with a class of gentlemen calling themselves horse tamers, charging from two to ten dollars for instruction in the art—each one has large handbills, setting forth his superior qualifications as professor.

Having paid four dollars to a professor for initiation, I feel free to pronounce it (from experience) a sheer and palpable humbug, and caution the people generally against the snare of that particular class of professors. Their systems are cruel and dangerous to the life of a horse, ruinous to his docility, and destructive to any gentle disposition he might before have; and should this meet the eye of any one of them, who objects to these facts, I am ready to meet him with explicit truths and a weight of testimony that will more certainly protect the unwary from their swindles. That simple application of common sense management breaks horses, and puts equine professors to honest employment for a living, I think you will acknowledge.

Give us a place in the *Farmer* for this, and give your patrons a page besides, of practical reason, on the management of colts and horses, and save them the folly and cost of paying a professor for an injury.

Truly yours,

J. L. PATTERSON.

We have very little reliance on the results of professional horse taming for general use, but the success and the remarkable results they produce in special cases, have attracted great attention to the matter. If this shall be the means of inducing more generally the application of sound sense to the subject of training young horses, much good will have been accomplished. To judge by the practice of some people, it might be supposed that to "break a colt" meant to "break his head." The higher the spirit to be conquered, the greater is supposed to be the necessity for harsh treatment. But horse-nature is not very unlike human nature. Gentleness and kindness, associated it is true with firmness, must be the rule of management, severity the rare exception. With farmers, too often a great fault is, that a colt gets no regular training, but Tom, Dick or Harry is allowed to use, or abuse him, under the pretence of gentling. Whereas, until he is established in good habits, it is better if but one person have the management of him, and he a very careful, judicious, and by all means *good tempered* person. If boys are allowed to have anything to do with a colt, they must be such boys as this editor has not the pleasure of a personal acquaintance with.—Ed.

Good Cheese.

For a cheese of twenty pounds, a piece of rennet about two inches square is soaked in a pint of water twelve hours. As rennet differs much in quality, enough should be used to coagulate the milk sufficiently in about forty minutes; no salt is put into the cheese, nor any outside during the first six or eight hours it is being prepared, but a thin coat of fine salt is kept on the outside during the remainder of the time it is in the press. The cheeses are pressed forty-eight hours under a weight of seven or eight hundred pounds. Nothing more is required but to turn the cheeses once a day on the shelves.

MOTHER'S PREMIUM CHEESE.

The milk strained in large tubs over night, the cream stirred in milk, and in the morning strained in the same tubs; milk heated to natural heat; add rennet; curd broken fine and whey off, and broken fine in hoop with fast bottom, and put in strainer; pressed twelve hours; then taken from hoop, and salt rubbed on the surface; then put in hoop, without strainer, and pressed forty-eight hours; then put on tables, and salt rubbed on surface, and remain in salt six days for cheese weighing thirty pounds; the hoops to have holes in the bottom; the crushings are saved and set and churned to grease the cheese. The above is for making one cheese per day.

1. No salt to be put into the cheese, but fine salt rubbed on the surface.
2. Remain in press forty-eight hours.
3. Dry, cool cellar, not damp.
4. To make whey, add the rennet while the milk is warm.

I would like a cheese made after either of the above plans.—*N. E. Farmer.*

The Weather and the Crops.

To the Editor of the American Farmer:

I send you an extract for insertion in the *American Farmer*, from a recent letter of the intelligent London correspondent of the *National Intelligencer*. The agricultural statistics, as well as the observations upon the weather and its effects, are exceedingly interesting, and shows how much value Englishmen attach to the cultivation and diffusion of such important and valuable information. While our people are excited about political conventions, and the contest as to whether Douglas or Seward or Crittenden shall execute the laws of the country for the next four years, is growing hotter and hotter and hotter, Englishmen are wisely investigating the condition of the weather and the crops, and carefully collecting the result of last year's harvest, and showing its effects upon the status of her people. When will our Government learn to collect and disseminate annually information so important to a proper understanding of the productions and wants of the country?

A MONTGOMERY FARMER.

May 3d, 1860.

The unusually late arrival of the settled spring season is exciting a good deal of attention, and some degree of apprehension. Last year we had the treat of an early spring. Long before this date we were beholding blossoming trees and early flowers, and heard the notes of birds long before they were listened for. The case is widely different this year. We are told by high authorities that there has not been so late a season for a quarter of a century. Last year our early promises were blighted by a sharp April frost, which spoiled the fruit crops and did much other damage. As for this year the thermometer stood at the freezing point yesterday morning, and there was more than one storm of snow and sleet from the northeast during the day, yet when the spring does fairly set in, we may reasonably hope that we may depend upon its continuance, and that when nature at length revives she will not droop again till her annual task is done.

There was a short supply of hay to begin this year with, and there was a general fear that the winter root crops would not hold out, and the fear has been too much realized. If the farmers of the present day had not known more than their fathers did about various kinds of farm-yard food, the horses and cattle would have died off faster than theirs ever did. In the vegetable world the havoc has been very great. The nobleman has mourned over his "ancestral trees" levelled by the terrible winds of the past winter, and the cottager finds his carnations as dead as straws; even the wall-flowers, which never failed him before, have failed him now; his geese and ducks have not begun to lay at six weeks beyond the usual time, and nearly all his bees are dead. High and low, rich and poor, all agree that they have never known a fiercer cold than

that of the past winter, nor a season of more rapid and extreme changes in temperature.

There is, however, a set-off of some advantages even in this season of disadvantages. In the first place, there has been a sufficient rain-fall, which there had not been during six or seven preceding years. There is no apprehension of a summer drought. Again, the condition of the soil is good, wherever it can be worked, for the frost has gone deep, and the earth is in an excellent state for culture; and, lastly, there must have been a pretty complete destruction of injurious insects and vermin. We have no accounts from Ireland of the prospects of the season there, but the sister Island has great reason to desire it may be a fruitful one, since the last was very unproductive. The harvest of 1859 fell behind that of 1858 no less than 9,468,152 bushels in cereals, and 562,702 tons in potatoes. In food for cattle there was a reduction of 96,477 tons of mangold wurtzel, of 902,717 tons in turnips, of 51,487 tons in cabbage, and 379,227 tons of hay. The only increased crop was that of flax, which was owing to a greater quantity of land being appropriated to its cultivation. The above facts probably operated to produce an increased emigration from Ireland. The emigration from that country in 1858 was 68,093 persons, in 1859 the number of emigrants was 84,599. This is a gloomy picture, and it is well that, on turning to the subjects of trade and finance, we find a brighter one. Owing to new commercial regulations, and no doubt, in some degree, to political complications, business with the European Continent is dull; but that with America is decidedly reviving. If the course of politics be moderately smooth, eager French purchasers will be in the market as soon as our American customers have received their supplies. The prices of goods in our manufacturing districts are firm, the machinery running full time, the work-people well employed, and wages in some towns advancing. We stated in our last that the income of 1859 considerably exceeded the calculations of the Chancellor of the Exchequer, and we can even add that the railway property of the United Kingdom is steadily and generally advancing in price.

Management of Sheep.

HOW TO GET UP A GOOD FLOCK AND MAKE IT A PROFITABLE BUSINESS.

It is seldom that we find more good, sound common sense in the same space, than is contained in the following article from a correspondent of the *Michigan Farmer*. We commend it to the attention of every farmer who is at all interested in raising sheep:

"As sheep husbandry is one of the branches that I am engaged in, I will give what I consider some of the secrets of success, or rather some of the requisites to success in this department. It is thought by many that sheep need but little or no care, from the fact that they seem to flourish almost everywhere. We find them in every valley, on every plain, and upon every hill-top, where civilization has gone. The most casual observer will not fail to see the difference between

fifty and one hundred per cent. net profit on his flock. There are numerous flocks in my own observation that don't yield more than from two and a half to three and a half pounds per head, and that of an inferior quality, worth say thirty or thirty-five cents per pound, while the average of my flock is six pounds per head, worth from forty to fifty cents per pound. There is also a difference of three to one on each sheep when offered in the market. Many are ready to say that these are mere assertions. Any one that will visit my flock will see that I have not overrated them. And now for the ways and means of getting up the right kind of a flock.

First, then, I never allow my ewes to breed till the spring they are three years old. I never desire to see twins. If they make their appearance, I give them an extra chance to keep them up with the rest of the flock. I never breed from any old broken down ewes. I never allow my buck or bucks to run with the flock at any season of the year. I had rather tend my buck with one hundred ewes than turn him in with twenty-five. This course is very beneficial to the buck, and still more to his stock. These are points that any one will admit that will reason for a moment. I never allow more than forty sheep to run together. I never keep my sheep in pastures where they cannot get on dry ground to stand or lie down. I raise carrots or rutabagas for my sheep instead of feeding grain. It is natural for sheep to want to get to the ground, and roots are more like green feed, and hence better for them than grain. I have my lambs begin to come about the 20th of April, and take them away from the ewes the 20th of August. In this way the lambs become weaned, and take to feed before cold weather begins, and the ewes get up in grand order before winter, besides they are much more likely to bring lambs the next season. If at any time I have a sheep that does not appear to do well, I take it immediately from the flock, and if it does not readily recover, I kill, sell, or give it away. I give my sheep some kind of a shed in winter, to resort to when they choose. I never care about sheep having drink in the summer, if they have good pasture.

Care should be taken not to give too much salt in hot, dry weather, where there is no water in the pasture. I keep a careful watch over my flock, and if I have any ewes that do not breed to suit me, I dispose of them and their stock. Much care should be taken with regard to judicious crosses among sheep, as well as with other animals, and don't forget or neglect to give your sheep a sufficient amount of feed in winter, or pasture in summer, to keep them in good condition. There are many items too numerous to mention here that will suggest themselves to a careful observer, as the process of care and feeding advances. Many other things may be said with regard to sheep culture, but I will venture to say that any one that will adhere strictly to the above rules may rear a flock that will be of large size, good form, and uniform in appearance, and with a constitution that will resist all the diseases to which sheep are subject."

Christianity makes its true professor a gentleman. Paul, before Agrippa, was courteous.

Lime.

As the attention of the Farmers of Maryland is much drawn just now to the use of Lime, we republish a letter addressed some years ago to the late Judge Buel by Dr. William Darlington, of Chester county, Pa. As the lands of that county have become famous, and owe their high state of fertility in a large degree to the liberal use of lime, it will be a matter of much interest to our readers to be made acquainted with the manner in which it has been used by the Chester county farmers.

It will be observed that Dr. Darlington attaches importance to the use of putrescent manures in connection with lime—not of course in immediate contact with the fresh lime, but at the same time. We believe the same remark may be made too of the ammoniacal fertilizers in the market, that the beneficial action of lime will be promoted by their judicious use in connection with it:

DEAR SIR: I proceed, with great pleasure, to furnish you with such facts and remarks as my opportunities for observation have enabled me to offer. With a view to render the answers more explicit and satisfactory, I will annex them, seriatim, to your several inquiries.

Query 1.—“Upon what lands does lime operate most beneficially,—1st. In regard to geological formation,—as primitive, transition, secondary and alluvial? 2d. In reference to the soil,—as sand, clay, lime, and vegetable matter? 3d. As indicated by natural growth of timber and plants?”

Answer.—My residence has always been in a primitive region, and my observations very much limited to agricultural processes in soils upon that formation. The prevailing rock here is gneiss, with occasional beds, or veins, of hornblende, greenstone, and sienite. About five miles to the north of us is the great valley of transition limestone, stretching from northeast to southwest, and immediately on the northern side of this valley, running parallel with it, is a broken ridge of hills, formed of mica slate,—with beds of serpentine rock and hornblende, on the side next to gneiss rock, on the southeast.

Over the gneiss rock, and among the hornblende, the soil is generally a still loam; and I think the best effects are perceptible from a given quantity of lime. On the soil overlying the schistose rock, the good effects of lime are sufficiently obvious, under the management of skillful farmers; but the benefits seem to be less permanent.

On the serpentine rock the soil is extremely sterile; and neither lime nor barn-yard manure can be used with much advantage. In the limestone soil of the great valley, where one would suppose it was already redundant, lime is used with advantage; and much heavier dressings are put on, than in the adjacent districts. I cannot furnish the rationale of this practice, but I believe the fact is established, that more lime is required to produce the same beneficial effect on

soils resting on limestone rock, than upon those overlying gneiss, and perhaps some other primitive rocks.*

I have had no opportunity to witness the effect of lime upon secondary, and strictly alluvial, formations; but the circumstances have led me to suspect, that the same quantity of lime would not be so signally beneficial in secondary, as it is in certain primitive formations.

Lime undoubtedly has a good effect in soils which are sandy, even where sand predominates; but I believe its meliorating properties are most conspicuous in a clay soil, or rather in a stiff loam. A good proportion of decomposed vegetable matter adds greatly to the beneficial effects of lime; and hence our farmers are desirous to mingle as much barn-yard manure as possible with their lime dressings,—and to get their fields into what is called a good sod, or turf,—full of grass roots. Then a dressing of lime has an admirable effect.* The soils indicated by a natural growth of black oak, (*quercus tinctoria*,) walnut, (*juglans nigra*,) and poplar, (*liriodendron*,)—and those in which such grasses as the *poas* and *festucas* best flourish, are generally most signally benefitted by the use of lime. In short, I may observe, that lime has been found more or less beneficial in every description of soil in this district.

It is most so on hilly or rolling lands, where clay predominates,—less permanently so among the mica slate,—and least of all on the magnesian rocks. The soil on these last is rarely worth cultivating.

Query 2.—“What quantity of lime is applied to the acre, upon different soils, at a single dressing, and during a period of years?”

Answer.—The quantity of lime, per acre, which can be used advantageously, varies with the condition and original character of the soil. Highly-improved land will bear a heavier dressing than poor land. On a soil of medium condition the usual dressing is 40 to 50 bushels per acre. A deep, rich soil, or limestone land in the great valley, will receive 70 to 80 (and I am told even 100) bushels to the acre with advantage. On very poor land, 20 to 30 bushels per acre is deemed most advantageous to commence with. It is usually repeated every five or six years—i. e., every time the field comes in turn to be broken up with the plough; and as the land improves the quantity of lime is increased. The prevailing practice here is, to plough down the sod, or ley, in the fall or early in the spring—harrow it once—and then spread the lime (previously slaked to a powder) preparatory to planting the field with Indian corn. Every field, in rotation, receives this kind of dressing; and as our farms are mostly divided into about half a dozen fields, the dressing of course comes once in six years, more or less, according to the number of the fields. Some enterprising farmers, however give

*The yard manure is not usually mingled with the lime, when the latter is first applied. The practice is, to lime the Indian corn ground, prior to planting that grain, on the inverted sod,—and, the ensuing spring, to manure the same field for a barley crop,—or, to reserve the manure until the succeeding autumn, and apply it to the wheat crop. It is not well settled which of these is the better practice. Each has its advocates; but it is most usual to reserve the manure for the wheat.

their fields an *intermediate* dressing, on the sod, after they come into grass, which I consider an excellent practice,—tending rapidly to improve the condition of the land.

Query 3.—"Is it applied in a caustic or in an effete state?"

Answer.—It is usually obtained in a caustic state from the kiln,—deposited in heaps in the field where it is to be spread, and water, sufficient to slake it to a powder, is then thrown upon it. As soon as slaked it is loaded into carts, and men with shovels distribute it as equally as possible over the ground. It is generally considered best to put it on the ground while it is fresh, or warm, as the phrase is; and it is certainly easier to spread it equally when in a light, pulverized state, than after it gets much wet with rains. I am inclined to think, too, it is better for the land when applied fresh from the kiln.

Query 4.—"To what crops is it most advantageously applied, and at what season?"

Answer.—It is usually applied, as already intimated, to the crop of *Indian corn*, in the spring of the year—say the month of April. Occasionally it is applied preparatory to sowing wheat in autumn. When used as a *top dressing*, on the sod, it is generally applied in the fall—say November. The prevailing impression is, that it is most advantageously applied to the Indian corn crop; and hence the general practice. But the truth is, it is highly advantageous at any, and at all seasons; and our shrewd old farmers have a saying—"Get your lime on for your corn, if you can,—but be sure to get it on the land some time in the year."

Query 5.—"How is it incorporated with the soil—by the plough or the harrow? and is it applied in any case as a top dressing to grass and to grains, and with what effect?"

Answer.—As already stated, after the sod is ploughed down for Indian corn, it is usually harrowed once to render the surface more uniform. The lime is spread as equally as possible over the field, and then the ground is well harrowed in different directions, in order to incorporate the lime with the soil. Soon afterwards the field is marked out and planted with corn. The plough is rarely if ever used for the purpose alluded to. I have mentioned above, that lime is occasionally used as a top dressing for grass. It appears to be particularly beneficial to that crop; and answers extremely well when applied in that manner. The practice of applying it to Indian corn as above stated, is, however, chiefly followed; and the application of a dressing to each field, in rotation, causes as much labor and expense every year, as our farmers generally are willing to incur. Lime has rarely been used as a top dressing to grain crops within my knowledge.

Query 6.—"What is the ordinary cost per acre of liming, and the relative profits, in increased products of a period of years?"

Answer.—Quicklime, at the kilns, usually cost twelve and a half cents a bushel. The farmers generally haul it with their own teams; and the additional expense depends, of course, materially upon the distance. It is frequently hauled by them a distance of eight, ten, and even twelve miles. The average, perhaps, is about five or six

miles. It is delivered to me by the lime-burners (a distance of near six miles) at eighteen cents a bushel. At the rate of 40 bushels to the acre, the cost, at eighteen cents, would be \$7.20 per acre. It is difficult to estimate, with precision, the relative profits in increased products. But I can safely say, from my own experience, on a small farm of middling quality, that two dressings of lime at the above rate, in the course of eight or nine years, have more than trebled the products of the land to which it was applied, both in grain and grass. It is to be understood, however, that the system of *ploughing only so much ground as could be well manured* was adopted at the same time. I may also observe, generally, that the farmers of this district (who are shrewd economists) are so well convinced of the beneficial effects of liming, that, costly as its application seems to be, they are unanimous in sparing no effort to procure it. Lime has been found peculiarly favorable to the growth of pasture, when the farm is otherwise well managed; and as our farmers are mostly in the practice of feeding cattle, they resort to liming as an indispensable auxiliary to successful grazing.

Query 7.—"Is lime applied with yard manure or earthy composts, and with what results?"

Answer.—I have already intimated that vegetable matters, and especially yard manures, are highly important in conjunction with lime. Both are valuable even when used separately; but when combined, the effect is most complete. If to this be added the great secret of good farming,—viz. to plough only so much ground as can be well manured,—the state of agriculture may be considered nearly perfect.

Lime is in some instances added to earthy composts, preparatory to distribution in the field; but it is doubtful whether the extra labor of this method is compensated by any peculiar advantages. It is not generally practised.

Query 8.—"Is powdered limestone (carbonate of lime) applied to soils; and, if so, does it induce fertility otherwise than by mechanically ameliorating their texture?"

Answer.—No instance of powdered limestone being applied to soils has come under my notice. I can, therefore, form but a very imperfect opinion of its utility. If it were even as beneficial as quicklime, (which I doubt,) I apprehend it could not be procured and applied with less cost and labor.

Query 9.—"On what soils, if any, in your neighborhood, is lime found to be inoperative as a fertilizing application; and the cause of its failure?"

Answer.—There is no soil in this district deemed worthy of cultivation, on which lime is *wholly* inoperative as a fertilizer. On some sterile, slaty ridges, and on magnesian rocks, it has indeed but a slight effect; and even the benefits of barnyard manure are very transient. In low, swampy grounds, also, unless they are previously well drained, the labor of applying lime is pretty much thrown away. There seems to be something in the constitution of magnesian rocks peculiarly unsuited to the growth of the more valuable plants. Indeed, there are patches of the soil perfectly destitute of all vegetation. Repeated attempts have been made to cultivate the bases of

our serpentine banks; but neither lime nor manure will enable the farmer to obtain more than a light crop of small grain. Neither clover nor the valuable grasses can be induced to take root and flourish in the uncongenial soil. It is, therefore, almost universally neglected.

I have thus endeavored (in rather a desultory manner, I confess) to answer your queries according to my best judgment. If what I have furnished shall in any degree tend to make the subject better understood, I shall be amply gratified.

With great respect, I have the honor to be, your obedient servant,

WM. DARLINGTON.

JESSE BUEL, Esq., Cor. Sec'y, &c.

Osier Willows.

Land that is very wet, not susceptible of drainage, I think cannot be turned to better advantage than to be planted with osier willows. They grow extraordinarily fast, and with every year the yield increases as the stools expand; and that without any trouble or expense, except the annual cutting of the crop.

A few years ago I set out several hundred cuttings that I obtained from a neighbor, and the increased yield induced me to set out all my wild land that could not be drained to advantage for grain or grass crops, with osier willows, which I am satisfied pay better than anything else that can be produced on such land.

Eight or nine feet in one year's growth is nothing extraordinary, and the number of sprouts from one stool in a single year, is surprising. I cut only a few days from fifty to sixty from single stools, not only three years ago. It is said that several millions of dollars worth of osier willow and willow work is annually imported, which might all be saved to our citizens, if they cared a little more for their own interests. Sets can be forwarded to any part of the country where railroads extend, since the establishment of the express enterprise, at low rates; so that almost any one having suitable ground can obtain cuttings. They grow without difficulty, forming permanent roots the first year and a small crop. The second and third year's crop will quite surprise the new beginner.

Besides what is said above of osier willows, they are also excellent for strengthening the embankments of mill dams, &c., by the numerous little roots which run to a considerable distance, forming a close matting in and on top of the ground, preventing the water from breaking through.—*Germanstown Tel.*

OILING LEATHER.—The *Scientific American* says that oils should not be applied to dry leather, as they would invariably injure it. If you wish to oil a harness, wet it over night, cover it with a blanket, and in the morning it will be dry and supple; then apply neat's foot oil in small quantities, and with so much elbow grease as will insure its disseminating itself throughout the leather. A soft, plant harness is easy to handle, and lasts longer than a neglected one. Never use vegetable oils on leather; and among animal oils, neat's foot is the best.

Milk and Butter.

Good butter is not always to be obtained by treating the milk according to certain prescribed rules, but other important matters are first to be looked after. In order that we shall have an article pleasing to the most dainty palate, we should in the first place select our stock from the breeds that have uniformly produced good milk and butter—yet even in the same breeds we find animals differing very materially in the quantity and quality of their products. Without entering upon a discussion as to which is the best variety, or as to the marks by which to judge of an animal suited to milking or butter making, I wish only to direct the attention of all dairymen to this point, as being one of the greatest importance. The quality as well as the quantity of milk obtained from different cows, we know very much, the specific gravity of which fluctuates, according to Scherer, between 1018 and 1045, thus showing it to be heavier than water. A good plan to test the value of the milk from each animal, would be to feed them for a short time upon the same kinds of food, then obtain the specific gravity of the milk separately by means of the lactometer, and the amount of butter (which is known by the number of oil globules) by the microscope. Those, however, who are not acquainted with the use of this instrument, can, by a little care in keeping each cow's milk separately, determine the amount of butter in any given time, and animals not coming up to a certain standard should be disposed of, and others more valuable put in their places.

Having then obtained such stock as is desirable, we should next turn our attention to the food, drink and general care of the animals under our charge. We know that in regard to human beings it is necessary that considerable attention should be paid to diet, drink, &c., if we would preserve the health of the individual and obtain from him or her such labor, mental or physical, as nature has vouchsafed to them. A person laboring under any bodily disease is incapacitated to a certain extent to perform any duty—the secretions become changed in amount or vitiated in quality, and these in many cases are almost the only evidence of the nature of the disease. One of the best illustrations that can be given, is in the mother who, from some improper indulgence in food or drink or from some exposure, soon finds the infant suffering on account of her impropriety; and even during fits of anger the lactal secretion has become so much changed that the infant has been thrown into convulsions while partaking of the nourishment which heaven has ordained for its support. We have frequent experience of the injurious and even fatal influence exerted by the milk of cows on the life of their calves, clearly indicating the existence of chemical metamorphosis in the milk, and the presence within it of certain abnormal substances.

These are but a few facts, among many, with which all must be more or less acquainted; yet many we doubt not have never seriously thought that these things have any influence upon animals under their charge. But we must not forget that all organic beings, whether human or belonging to the inferior orders of God's creations, are subservient to certain laws, and that

should these be infringed upon, the penalty will have to be paid. The animals under our care, then, should have every attention during all seasons of the year; they should be sheltered from the bitter blasts and driving snows of winter, as well as from the burning rays of a summer's noonday sun; they should have sufficient room and time allowed to exercise in the pure and invigorating air, and not, as is often the case, be housed for days and weeks together. Pure water should always be where they have easy access thereto, and not merely have a chance once in twenty-four hours to quench their thirst. When stabled they should be properly cared for—the manure should be removed daily, a bed of clean straw given them, and their coats should be kept clean by being curried every day. The food given them to eat should certainly claim the attention, as the milk is often impregnated with heterogeneous matter taken up from the digestive canal. The milk and butter of cows indicate unequivocally the character of their food or pasturage, especially when fed on turnip, garlic, &c., so that these things require attention if we would have good butter.

It is a custom with many farmers to reserve the most inferior kinds of hay and grain for their cows, and in many cases even this is given in a mouldy or decayed condition. Can we expect to preserve the health of our animals with such food as this? Will not mouldy hay and rotten corn generate disease? Horses, as they are considered more valuable than cows, must have the best—their health is a matter of importance to every owner, as it requires a well-filled purse to replace them if disabled or lost; but cows can be replaced at a much less expense, and the health of those who partake of the diseased milk and butter seems to be of little account. The amount of disease thus entailed upon the human family from the use of milk and butter from animals not in perfect health, if it could be exactly known, would be almost incredible. It then certainly behooves every one to keep those animals whose flesh or bodily secretions are used by us for food, in the most perfect health possible.

For the purpose of increasing the lacteal secretion, many kinds of food are suited, such as turnips, ruta bagas, corn meal, carrots, &c., but they do not generally increase the amount of butter in the same proportion as they do the milk. Without, however, proceeding to discuss the value of different materials which would require an analysis of each of them, I will make a few general remarks.

Boussingault found that cows fed upon carrots, without the leaves of the plant, yielded milk containing 1.25 per centum of butter, while the milk contained 1.4 per centum of butter where the food consisted of oats. Playfair noticed an increase in the quantity of butter in the milk when fed on potatoes. Boussingault, from experiments on two cows, found that after feeding the animals on beet-root, the milk of one contained 4.56 and of the other 3.42 per centum of fat; when the food consisted of the after crop of grass, the milk yielded 4.39 and 3.92 per centum of fat; and 4.63 and 3.97 when potatoes were used.—Gasparin found 3.53 per centum of butter in the milk of a cow when fed in the ordinary manner, and 4.87 when the food consisted of maize. Bous-

singault found the milk of a cow richer in casein when the animal had been fed on potatoes than when any other food was taken. Reiset found the milk of cows which were at grass much richer in fat than when the animals had stood all night in the stalls without food, but, on the contrary, motion of the animals tended to decrease the amount. Dairymen find it to their advantage to turn out their stock during the night. Hay that has been cut and collected in a dry summer, yields a milk richer in butter than hay cut in a wet season. Too much attention cannot be given to this department, and we would most earnestly recommend to all to keep an accurate account of the food furnished to their cattle and the increase of milk and butter derived from such feeding, as well as the effect upon the quality of both, and thus by comparing their notes at the end of the year, through the public journals, much valuable information would in a few years be obtained.

Dairymen and stock-raisers should make themselves acquainted with the laws which govern the nature and habits of the animals under their charge, and they should leave nothing undone that will tend to the health of them, for upon that depends the health of all who partake of their productions.

Milk when first drawn is of an alkaline reaction, but when allowed to stand for some time the cream rises to the surface and the casein remains beneath. When milk stands in a high temperature, or there is considerable electricity in the atmosphere, the acid increases so greatly that the casein will be coagulated. Rennet, as is well known causes it to coagulate also. The first milk after delivery contains certain morphological elements known as *colostrum-corpuscles*, (the *corpus granuleux* of French physiologists.) These generally disappear after the third or fourth day, yet generally return upon any disease supervening. Care is necessary not to allow calves to suck or partake of the milk during the first four days, as their lives may pay the forfeit of so doing. Blue milk is caused by the presence of an *infusorium*, which is called *ribrio cyanogenus*, or by some of the lower forms of vegetation.

It would, of course, be superfluous to make any remarks describing the mode of obtaining milk, yet I would say that the udder and teats should be cleansed before milking, and the milk should be drawn as quickly as possible from the cow, as more can thus be obtained. Twice a day is sufficient. Good milkers are very necessary, or the animals will get into bad habits, and less butter will be made if the cows are not milked clean. Peligot made the striking observation which Reiset recently confirmed, *that the milk last yielded during milking is much richer in fat than that which is first drawn*. Carelessness in milking is also the cause of many cows being dried up.

So long as the milk obtained is pure and free from disease and the place is suitable, we will have, with proper care, but little difficulty in obtaining good butter. A spring-house is universally acknowledged to be the best place for making butter, yet many do make good butter without one.

Neatness and cleanliness are to be observed by the dairyman who desires sweet butter, and it cannot well be obtained without. The milk

—should be carefully strained and then put in pans, filling them three-fourths full, and kept in a cool place, the temperature of which should be about 50° Fahrenheit. As to the length of time for standing before fit to skim, we cannot give a specified time, as this must necessarily vary in different seasons. Warmth seems to hasten the process (as before stated) by which the casein is separated from the oil globules; thus in winter we find the cream is longer rising than in summer. After the cream is removed, it should be churned before becoming the least acid. Scalding the churn before putting in the cream is generally of use. It should be churned steadily until the butter is separated from the whey, when it should be removed, and the buttermilk worked out, a portion of salt added, and then done up in pounds or cakes for use.

We have said but little about the making of butter, as it has been well described in the columns of the good old *Telegraph* several times.—*Corres. Germantown Telegraph.*

Norton's Virginia, Herbemont and Concord Grapes.

We find that at the annual meeting of the Missouri Grape Growers' Association, Mr. Geo. Hummann, an experienced grape grower, spoke very emphatically in favour of the three grapes named above as against the old favourites, Catawba and Isabella, and his opinion seems to be sustained by the voice of a majority of those in attendance. "The Norton's Virginia, Herbemont and Concord have done well," he says, "being all that is claimed for them. The Norton for wine, the Herbemont for wine and table, and the Concord a superior table grape. The Catawba and Isabella I reject. I know that I am coming in contact with the prejudices of some and the interest of others, when I speak against these, but I do this advisedly, after six to eight years' trial, in every location, soil, culture, and mode of pruning."

The vote of the Association on the grapes we find as follows:

FOR WINE.

Norton's Virginia Seedling, 12; Herbemont, 8; Catawba, 2; Delaware, 4; Cape, 1.

FOR TABLE.

Concord, 14; Delaware, 10; Meade's Seedling, 4; Bartlett, 4; Halifax Seedling, Diana, Catawba, and Isabella, 2 each.

Mr. H. gives Mr. Downing's description of the Norton and his own enumeration of its merits as follows:

"*Norton's Virginia, Norton's Seedling.*—A native seedling, produced by a cross between the Bland and Miller's Burgundy, by Dr. N. Norton, of Richmond, Virginia. It is a most productive grape in garden or vineyard, bearing very large crops (especially at the South, where many kinds rot,) in all seasons. It has been confounded by some with Ohio grape, from which it is quite

distinct—more pulpy and less agreeable for the dessert, though probably a much better wine grape.

Bunches long, sometimes eight or nine inches, occasionally shouldered, somewhat compact.—Berries small, round. Skin thin, dark purple. Flesh pulpy, with a brisk, rather rough flavor. The foliage is light colored, shaped like the Elsinburg. Shoots strong and hardy."

So far Downing in 1845, and the description still holds good. With that nice, almost instinctive perception of the qualities of fruit, which he possessed in such an eminent degree, he, even at that time, foreshadowed its great destiny as a wine grape. Norton's Virginia has opened a new era in American grape culture. While in the Catawba we have boasted of a grape whose juice would equal the far-famed hock wines of the "Fatherland"—in the Norton's Virginia we have one, whose dark colored, high flavored juice can boldly compete with the best of Burgundy and Port wines, while its qualities as a sure and abundant bearer will at once place it far above that field favorite of Ohio wine growers, the Catawba, which is subject to every change in the atmosphere.

1st. It is as hardy as an oak, having even withstood the terrible winters of 1855 and 1856 without any injury.

2d. It adapts itself to any soil, bearing plentiful crops on the rocky and steep hillsides, as well as in the deep and rich bottoms of our rivers and creeks, only varying somewhat in the quality of the wine it produces in different localities.

3d. It starts late in spring, blossoming about a week after the Catawba, and ripens its fruit a week sooner than that variety, which is a great advantage in localities subject to late frosts in spring, and early frosts in the fall, and will make it valuable at the North.

4th. It is never touched by mildew and rot, and will produce, under fair treatment, an average of from 300 to 500 gallons per acre.

5th. It makes an excellent, very dark colored wine, which, under proper treatment, will compare favorably with good Burgundy or Port, though it has a peculiar, strong flavor of its own, and which sells very readily at \$2 per gallon, or \$12 per dozen bottles. When the must of the Catawba has from 78 to 85 degrees specific gravity, the Norton's Virginia has from 81 to 90 degrees.

6th. It will stand more hard treatment than almost any other variety, as it bears fair crops, even if utterly neglected, though good culture will much improve it.

7th. It is a fine ornamental vine, as its foliage will remain green and fresh until touched by the frost; and a strong grower, whose hardiness fits it extremely well for the covering of arbors.

8th. It is even when fully ripe, a pleasant eating grape, though it will never be a popular market fruit, as the berries are small; but it is very sweet, and many prefer it to the Catawba. These are its advantages. The only drawback to this is, that it will not propagate from cuttings, but must be propagated by layering or grafting.—But this is not so difficult, as a good vine, when two to three years old, will make from thirty to forty strong layers a year, besides producing some grapes.

Value of Manure from Different Kinds of Food.

We have frequently alluded to the fact that the composition and value of manure, other things being equal, corresponds to the composition of the food consumed by the animals from which the manure is derived. People talk of horse, or cow, or sheep, or hog, or hen manure, as if these manures had a fixed value, irrespective of the food consumed by these different animals. This is not the case. The animal exercises very little influence on the manure. The manure derived from a given quantity of the same food consumed by a horse, a cow, a sheep, or a hog, varies very little, if at all, in composition or real value.—Hog manure is more valuable than sheep manure as a general rule; but it is owing simply to the fact that the hogs eat richer food than the sheep; hen manure is worth more, as a general rule, than that of other stock kept on the farm, but this, too, is attributable to the same cause, and to the fact that the liquids and solids are voided together. The liquid portion of the excrements of all animals contains the most valuable portion of the manure, and it is too frequently allowed to run to waste; whereas in the case of poultry it is all saved, and hence this manure is of great value. But if the liquid and solid excrements were all saved, they would be just as valuable when obtained from a horse as from a hen, if the food consumed was the same. This fact can not be too often repeated. Farmers will never succeed in increasing the value of the manure heap till they obtain right views on this subject.

In England, where farmers purchase large quantities of food for feeding to animals on the farm, this fact is beginning to be appreciated. Mr. Lawes, than whom there is no better authority, has recently published a table "showing the estimated value of the manure obtained from the consumption of one ton of different articles of food; each supposed to be of good quality of its kind." We have reduced the gross ton to our common ton of 2,000 lbs., and give the price in dollars and cents. The following is the table:

Description of Food.	Estimated money value of the Manure from 1 ton of each Food.
1. Decorticated Cotton-seed Cake.....	\$27 86
2. Rape Cake.....	21 01
3. Linseed Cake.....	19 72
4. Malt-dust.....	18 21
5. Lentils.....	16 51
6. Linseed.....	15 65
7. Tares.....	15 75
8. Beans.....	15 75
9. Peas.....	13 38
10. Locust Beans.....	4 81 (?)
11. Oats.....	7 40
12. Wheat.....	7 08
13. Indian Corn.....	6 65
14. Malt.....	6 65
15. Barley.....	6 32
16. Clover Hay.....	9 64
17. Meadow Hay.....	6 43
18. Oat Straw.....	2 90
19. Wheat Straw.....	2 68
20. Barley Straw.....	2 25
21. Potatoes.....	1 50
22. Mangolds.....	1 07
23. Swedish Turnips.....	91
24. Common Turnips.....	86
25. Carrots.....	86

Mr. Lawes has been engaged for many years

in experiments on this subject, and we have no doubt that the table correctly states the *relative* value of the manures obtained from the different foods; that is to say, if the manure obtained from the consumption of a ton of meadow hay is worth \$6.43, that made from a ton of clover hay is worth \$9.64, or half as much again—and this is true everywhere. The estimates are based on the value of manure in England, and are undoubtedly correct; but of course the figures are only true *relatively* where manures of all kinds are of less value, as is the case in the newer sections of this country. In the vicinity of this city, manures are quite as high as in England, and here the estimates may be adopted without any qualification; and the same is true of a great portion of New England, and nearly, if not quite, throughout the entire length of the Atlantic slope, where the use of guano or other artificial fertilizers is profitable.

"But is it then true," we hear it asked, "that the manure made from one ton of clover hay is worth as much as that made from a ton and a half of timothy or meadow hay?" There is no doubt on this point; and it is a fact we have often mentioned. It is one reason why we so repeatedly urge the importance of an increased growth of clover as a means of enriching the soil. But in addition to this, it is also true that clover does not impoverish the soil so much as timothy or other grasses when both are consumed on the farm. If both the clover and the timothy are sold off the farm, the clover *may* impoverish the soil as much as the timothy, though there is some doubt on this point.

It will be seen that decorticated or husked cotton-seed cake affords richer manure than any other food. Cotton-seed has been used for many years as a manure in the Southern States, with good results. Within the last few years, a process has been patented for removing the husks from the seed, so that it can be used for making oil, in the same way as linseed, rape seed, etc. The cake that is left, like the latter, is used for food or manure. This cotton-seed cake has attracted considerable attention in England, and all the experiments which have been made, so far as we have seen, indicate that it is quite as nutritious as linseed cake, while, as will be seen from the above table, it affords richer manure. According to Prof. S. W. Johnson, of New Haven, Ct., this cake is manufactured to a considerable extent at Providence, R. I. The cake sells for \$25 per ton. Prof. Johnson, from analyses which he has made of it, estimates its value as a manure at \$21.60 per ton. From the enormous quantities of cotton seed which can be obtained, and which has hitherto been thrown away, there can be no doubt that this new branch of industry will be extensively prosecuted.

It will be seen that beans and peas afford very rich manure. The remarks we have made in regard to clover will apply also to these leguminous plants as compared with the cereals, oats, barley, Indian corn, etc.; they not only afford richer manure, but their growth impoverishes the soil far less than the cereals. It will be seen that the manure obtained from a bushel of peas is worth twice as much as from a bushel of Indian corn.

Malt dust, it will be seen, affords rich manure.

We do not know what is done with it at the breweries, but if it can be obtained at a reasonable rate, it might be purchased to advantage. It has long been used in England as food for stock. Some years ago, when the writer was with Mr. Lawes, at Rothamsted, a well known agriculturist and member of Parliament from one of the Eastern counties, came to examine the experiments which were then being made to test the value of malt as compared with barley as food for stock. Great efforts were at that time made to induce the Government to repeal the malt duty—for the reason, as was alleged, that malt was much more fattening than barley; and if the duty was removed, farmers could malt their barley and use it as food for cattle on their farms. Our friend had warmly espoused the cause, and when we informed him that our experiments proved conclusively that the barley was more nutritious than the malt made from it, he exclaimed, "That cannot be. I have for years used malt-dust and found it very fattening; and if malt-dust is so good, what must the malt itself be?" This was a species of argument which might answer in the House of Commons, but which had very little weight at Rothamsted, where it had just been found that malt-dust contained three times as much nitrogen as the malt.

It will be seen that the manure from a ton of clover hay is worth as much as that made from four tons of straw; while that from one ton of oil-cake is worth as much as that from nearly nine tons of straw.

The reason why the root crops are so low down in the scale is that they contain such a large quantity of water. Leaving the water out, they afford about as rich manure as clover hay.—*Genesee Farmer.*

REGULARITY IN MILKING.—Mr. O. E. Hannum, a very successful dairyman of Portage county, Ohio, a native of Berkshire, Mass., names the points of his management as follows: Good cows, good feed, good milking, good care and management of the milk. He puts "good milking" in italics, and remarks: "Each cow should have a steady milker, be milked as fast as possible, and all the milk drawn. I am satisfied that there is a loss of one-third in many dairies, by the lazy, hap-hazard way in which cows are milked. I have known persons sit down in the milking-yard and go through with some long yarn, and be from ten to twenty minutes milking one cow, when it should be done in less than five."

BUILD HIGH STABLES.—That is, high between floors. Most stables are built low "because they are warmer." But such people forget that warmth is obtained at a sacrifice of the health of the animal and pure air. Shut a man up in a tight, small box. The air may be warmed, but it will soon lay him out dead and cold if he continues to breathe it. If stables are tight, they should have high ceilings; if they are not tight, but open to the admission of cold currents of air from all directions, they are equally faulty. A stable should be carefully ventilated, and one of the cheapest of modes is to build a high one.

Spaying Cows—Use of Ether.

MR. EDITOR: The spaying of cows is no new feature. As practised in former days it seemed a cruel performance; but, since the alleviating influence of ether, the term cruelty can no longer be applied, for, in five minutes the animal is so fully under its effect as to be insensible to pain, and in twenty minutes the operation is completed and the animal is quietly making way with her allowance of feed.

Yesterday I was present to witness the operation of spaying of five cows of the herd belonging to Edward R. Andrews, Esq., Home Farm, West Roxbury. This farm is devoted entirely to the production of milk for the Boston market. —Mr. Andrews had previously had eight cows spayed, and after one year's trial, so satisfactory in all respects had been the result, that he was determined to subject other animals to the same operation as they came into full milking, until his entire herd, consisting of some fifty head, should in like manner be made remunerative.

At 10½ o'clock, A. M., the hour assigned, Dr. Dadd, accompanied by three of his students, commenced the operation by casting the first cow on a bedding of hay on the ground floor. Immediately a sponge, saturated with ether and chloroform combined, was applied to the nose and kept there in a leathern bucket, till the close of the operation. In five minutes the animal was so insensible to pain that the veterinarian commenced with his scalpel, and bistoury, opening a place on the left side equi-distant between the lower rib and the hip, cutting through the cellular membrane and peritoneum, when he introduced his hand and removed the ovaries.—The small quantity of blood which flowed during the operation was sponged out as the cutting progressed. The parts were stitched, the ether removed, and ere the tethers could be removed the animal was feeding off the litter on which she was lying.

It was a pleasure to learn that Dr. Dadd has been eminently successful in all like operations, whether performed for lacteal or fattening purposes. Mr. Andrews' cows have continued in full milk, and have proved uniformly healthy and quiet, and this disposition to quietness may as a consequence give an enhanced value to milk coming from the farm—at least for infants requiring to be fed from the same cow the year round.

Dr. Hayes, one of our most eminent chemists, has now on hand a can of milk from cows heretofore spayed, with the view of testing its quality. The result of his analysis shall be handed you for publication.

Were I a citizen, and obliged to use milk in any form, I should congratulate myself on having made a visit to Mr. Andrews' farm, where neatness (to a nicety) pervades every department, even from the well cared for cow, with her bright eye, (denoting health) down to the care in cleaning of the dairy utensils—a thing of no mean importance. There is really a pleasure in seeing animals thus cared for, after having visited like establishments in New York, where cattle were packed without a chance for ventilation, and looking the last remnant of diseased animal life, under the influences of still slops.—*Boston paper.*

The American Farmer.

Baltimore, June 1, 1860.

TERMS OF THE AMERICAN FARMER.

Per Annum, \$1 in advance—6 copies for \$5—13 copies for \$10—30 copies for \$20.

ADVERTISEMENTS.—For 1 square of 8 lines, for each insertion, \$1—1 square per annum, \$10—larger advertisements in proportion—for a page, \$100 per annum; a single insertion, \$15, and \$12 50 for each subsequent insertion, not exceeding five—payable quarterly in advance.

WORTHINGTON & LEWIS,

Publishers of the "American Farmer,"

CARROLL HALL, S. E. Corner Baltimore and
Calvert streets, Baltimore.

MR. WM. C. LIPSCOMB, JR., is our Traveling Agent for Maryland and Virginia.

To a large number of our readers we send with the present issue of the *Farmer*, bills for subscription to next volume. Those who do not receive such, will please not consider themselves slighted—they shall have due attention with the July issue. Of a necessity our accounts have to be prepared some time in advance, and those who have paid us recently, may find a duplicate bill in their paper. This will especially be the case in the Southern counties on the Western Shore of Maryland, where our Agent, Mr. Lipscomb, has been making collections, and whose accounts were received after the bills for that section had been written and placed in regular mailing order.

Remittances can be made by mail at our risk, (for which receipts will be returned, when requested,) either in gold dollars, three cent postage stamps, (ten cent stamps we cannot use,) or bank notes—for sums under five dollars we prefer gold or stamps.

Since the purging of our lists (a year since) of non-paying contributors, we have a very large, largely increasing and satisfactory list of subscribers, which in point of promptness in payment, will, we think, compare favorably with those of any similar publication. We know that we have only now to remind them that the new volume commences with the July number, in order to receive from them the annual substantial assurance of their satisfaction with our labours.

VOLUMES OF THE FIRST SERIES OF THE AMERICAN FARMER AND OF THE TURF REGISTER WANTED.—We are desirous of getting for a friend, who is secretary of one of the State societies, for the

library of his society, volumes of the *Farmer* of date previous to 1830—especially those between 1825 and 1830. Also the volumes of the *American Turf Register and Sporting Magazine*, beginning with fourth volume. If any of our readers are able to oblige us in the matter, a fair price will be paid.

Seventh Annual Report of the Secretary of the Massachusetts Board of Agriculture, together with Reports of Committees appointed to visit the County Societies.—We are indebted to Charles L. Flint, Esq., the able Secretary of the Massachusetts Board of Agriculture for several copies of the above named volume. It contains the Secretary's own valuable Report of a hundred and fifty pages, being his seventh Annual Report, and embraces a large amount of useful matter gathered by committees appointed to visit all the county associations of the State.

We are indebted to the same gentleman for a copy of the new edition of *Milch Cows and Dairy Farming*, a work which took its place when first issued as a standard, and comes to us in its new suit much improved in appearance, with the latest information on the Pleuro-Pneumonia, Black Tongue, &c.—a very cheap book at \$1.25 cents.

We are glad to learn from Mr. Flint that a new edition of his *Grasses and Forage Plants* is about being issued.

We have received from the same source, Transactions of the Massachusetts Society for Promoting Agriculture, new series, vol. 1, part 2. We find here among a number of excellent essays, one by the Secretary, R. S. Fay, Esq., on *Grass and Pasture Lands*, in which a leading editorial of the *American Farmer* is quoted at large in support of the author's views on surface manuring.

Also, Agricultural Tract, No. 1: *Culture of the Grasses*—Extract from the Fourth Annual Report of Charles L. Flint, Secretary of the Massachusetts Board of Agriculture.

New American Cyclopædia, vol. ix., Hayne—Jersey City.—Through Mr. Henry Taylor, we are promptly in receipt from D. Appleton & Co., of this volume of their popular Dictionary of General Knowledge. We recognise among its contributors many of the best writers in the country. W. Gilmore Simms, of South Carolina, and John Esten Cooke, of Virginia, furnish each several articles. Capt. George S. Blake, of the United States Naval Academy, at Annapolis, contributes the article on Commodore Isaac Hull. The volume embraces a large variety of interesting topics.

Proceedings of the Missouri Fruit Growers' Association, for 1859, with an Essay on Grape Culture, by George Hussman, of Hermann, Mo.—We are favored with a copy of the above, and have been much interested in the perusal of its contents. Fruit growing, and especially grape culture, has become a business of great importance in Missouri, and the great number of our readers to whom it is a comparatively new thing, will be interested in what comes from intelligent and experienced cultivators there. For the grape especially, it is found that very extensive tracts of comparatively barren land, may be most profitably devoted to its culture. This fact may indicate to proprietors elsewhere the profitable use of the same description of land. The President of the Association, Mr. Norman J. Colman, said, "We have a vast amount of land in the State, too much broken to be available for ordinary farm crops, which is still rich in all the elements of vegetable life. The ridges and slopes of Missouri which have hitherto been regarded as barren and useless, have been proved by actual experiment, and demonstrated by the highest scientific authority, after the most rigid and extensive examination, to be the home of the vine." Notwithstanding complaints of mildew and rust, the cultivators realise, he says, an income of \$300 to \$500 per acre.

—We are indebted to J. H. Wallace, Esq., Secretary of the Iowa State Agricultural Society, for volumes of Transactions of that Society for the years 1857 and 1858.

And to the same gentleman for volume one, in two parts, of "Geology of Iowa." This is a Report on the *Geological Survey of the State of Iowa*, embracing the results of investigations made during portions of the years 1855, '56 and '57—by James Hall, State Geologist; J. D. Whitney, Chemist and Mineralogist. This work is exceedingly creditable to the enterprising young State of Iowa. We are surprised at the style in which a book of nearly a thousand pages is got up, and the costly manner in which it is illustrated. We do not doubt that on examination the valuable matter brought within the compass of its pages by the accomplished State officers who edit it, will fully justify the cost. What an example Iowa sets her sister States in this matter.

—We are indebted to J. W. Hoyt, Esq., Secretary of the State Agricultural Society of Wisconsin, for volume of Transactions of that Society for 1858 and 1859.

Transactions of the New York State Agricultural Society, 1858.—A brief reminder in our last number that we had failed to receive the volume of Transactions of the New York State Agricultural Society last issued, brought us in three days a polite answer from the Secretary, B. P. Johnson, Esq., that the volume for 1859, had not yet been sent out. We replied to this that it was the volume for 1858 we had failed to receive, and in four days more a volume that would adorn a gentleman's library was on our table.

We have not had time to make such an examination of the contents of this book of more than eight hundred pages as we intend, but see at a glance there is a week's pleasant work in store for a good reader. It is the eighteenth volume which the society has issued, and the thirteenth prepared under the direction of Col. Johnson, its model Secretary.

—We have a communication from Prof. Stewart, of St. John's College, received after our columns for this month were full, and which we will give in our next, headed *Guano vs. Coprolites*; in which he maintains that the value of phosphatic compounds, as manure, cannot be truly estimated by the percentage of phosphoric acid they indicate on analysis. It is an interesting topic, and we shall be pleased to insert the article in our next number.

THE WHEAT CROP.—We have not thought it necessary to give from time to time items from various widely distant sources, as to the prospects of the growing crop of wheat. They afford no index whatever to the result of the harvest. Now, from all that we can gather, the crop throughout the country promises well on the whole. The midge, the rust, and the storms, are all enemies however it may still encounter, and it is quite as impossible now as heretofore to anticipate the yield of the harvest. We only hope for the best.

TREES FOR THE AGRICULTURAL COLLEGE.—We have had the pleasure this month of forwarding to the Agricultural College, a lot of Evergreen Trees from the Hightstown Nurseries of Mr. Isaac Pullen, by order of Hon. Edward Wilkins, of Kent county. We repeat that our agency is at the service of all such orders.

JAPAN WHEAT.—We have received to-day (16th of May,) a number of stalks of the Japan Wheat from Mr. Thos. S. Jones, of Patapsco Neck. It is in full blossom and has made a fine growth.

A PREMIUM LIST—BOOKS, &c.

In commencing a new volume we wish to offer some inducement to our Agents to enlarge their lists of names, and propose, therefore, as below, a liberal list of Premiums, to be paid in cash. As premiums for a small number of names, we offer a number of valuable books, and especially call the attention of every subscriber to them. There is not one upon our lists, we suppose, who cannot induce at least one neighbor or friend to subscribe. It will be a favour to us if he will do so, and we shall take pleasure in acknowledging it in the manner here stated.

Terms.

Single subscribers may remit at our risk, as heretofore, \$1 per annum, payable always in advance.

Six copies will be sent for \$5.

For ten or any larger number, the agent will receive a commission of 20 cents for each subscription of \$1. Or clubs of ten or more may be formed, at 80 cents each.

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For the 7th highest list of not less than 20 names, at \$1 each.....	\$5

Books Offered to Subscribers.

To any subscriber, whose account is paid in advance, who will take the trouble to procure for us new subscribers, we will forward, post-paid, the following books, viz:

For 1 new subscriber—"Dana's Essay on Manures," or "Farm of Four Acres," or "Richardson's Domestic Fowls."

For 2 new subscribers—"Bright on Grape Culture," or "Farmers' Land Measurer," or "Every Lady Her Own Flower Gardener," or "Cole's American Fruit Book."

For 3 new subscribers—"Nash's Progressive Farmer," or "Allen's Domestic Animals," or "Buist's Family Kitchen Gardener," or "Bridgeman's Fruit Cultivators' Manual."

For 4 new subscribers—"Field's Pear Culture,"

or "Allen's Treatise on the Grape," or "Cotton Planters' Manual," or "French's Farm Drainage."

For 5 new subscribers—"Flint's Milch Cows and Dairy Farming," or "Langstroth on the Honey Bee" or "Flint's Grasses and Forage Plants," or "Randall's Sheep Husbandry," or "Gardening for the South," or "Buist's Flower Garden Directory," or "Youatt on the Horse."

For 6 new subscribers—"Darlington's Weeds and Useful Plants," or "Herbert's Hints to Horsekeepers," or "Johnston's Agricultural Chemistry."

For 8 new subscribers—"Downing's Fruit and Fruit Trees," or "Youatt and Martin on Cattle," or "Bridgeman's Young Gardener's Assistant."

For 10 new subscribers—"Thaer's Principles of Agriculture," or "Dadd's Anatomy of the Horse," or "McMahon's American Gardener."

For 15 new subscribers—"Downing's Landscape Gardening and Rural Architecture," or "Downing's Rural Essays."

For 18 new subscribers—"American Farmer's Encyclopedia," or "Stevens' Book of the Farm," 2 vols.

Subscribers entitled to any of the above named books, will please designate the one wanted, and it will be promptly forwarded to them.

We know from experience that a person of energy may take the highest cash premium offered. To those acting for us, who may fail to obtain a sufficient number of names to entitle them to a cash premium, we will willingly pay a commission of 20 per centum, where ten or more new names are sent. The premium lists will remain open until the 1st November; those competing will, however, please send on names and remittances as fast as received.

Write distinctly, name, post-office, county and State of each subscriber. Address

WORTHINGTON & LEWIS,
"American Farmer" Office, Baltimore.

We have had under consideration a communication from our intelligent correspondent, R. D. H., which we should have been pleased to publish, but it is taken up chiefly with a description of mineral lands which we are unwilling to insert to the exclusion of matter more strictly agricultural.

Subscribers in making remittances will please give us the name of their post-office and State. Our index is kept by post-offices. A little attention to this matter will save us much trouble, and ensure the amount being properly credited.

The Weighing and Measuring of Grain.

We learn that a meeting was held at the City Hotel, on the 1st May, at which some twenty odd farmers, from different counties on the Eastern Shore attended, by the invitation of a committee which had been appointed by a number of the grain dealers in the city. The committee received their guests with great hospitality, and through their chairman, made an explanation, very much at length, of the views put forth in a printed circular, which had been previously placed in possession of several of the farmers. This circular admits the necessity of some arrangement by which a more satisfactory mode of proceeding may be secured in the weighing and measuring of grain than that now practiced, and suggests that the system which it proposes will afford appropriate remedy for existing defects.

The farmers, after hearing the views of the chairman of the committee, held a conference amongst themselves, and came to the conclusion that the system suggested in the circular could not be adopted, even if it were calculated, in practice, to operate satisfactorily, inasmuch as it was in direct violation of the existing law relating to the inspection of grain, which it was obviously designed to repeal, as effectually as if it declared there should no longer be an inspector in the State. They also answered the committee, that the material items in the proposed system were much the same as those embodied in the bill which passed the Senate of Maryland at its late session, and which failed to pass the House, solely because it was not brought before it until too late a period to be acted on, except that its provisions were to be executed by a different agency: the circular proposing to constitute grain dealers the actual and effective machinery, while the law and the bill, proposed to leave to the appointees of the executive authority of the State, the duty of administering its provisions; that the bill provided for the creation of a disinterested board of referees, and a security against false samples, as fully as the circular, while its execution was entrusted to persons perfectly impartial—and that its provisions, if adopted by common consent of buyers and sellers, could be made available in practice with the approbation and concurrence of the inspectors, in perfect harmony with the existing law; and that they could not doubt the willingness of the inspectors to unite in such an arrangement, if entered into by the farmers generally, and the gentlemen in the city engaged in the trade. They further expressed the entire willingness of those present, to modify the pro-

visions of the bill in any way that would afford the most complete security to purchasers; provided only, that it gave at the same time to themselves security for the accurate weighing and measuring of their grain. They stated that these views were of course to be received as those of the farmers present, but they had full confidence that they would be adopted by a large portion of their absent brethren—and that it would result in effecting an object now deemed of very great importance, as they were informed by the buyers, viz: the sale of corn by weight, and also in the reduction, at the next session of the Legislature, of the cost of inspection to the lowest amount suggested, as the one cent per bushel had been made necessary solely by reason of the opposition to the inspection law, and the consequent comparatively small proportion submitted to inspection.

The committee, at the close of the meeting, invited their guests to partake of a sumptuous collation, to which most of them repaired, and were entertained with every thing that could please the palate or gratify the feelings of gentlemen.

The names of the committee were Israel M. Parr, H. L. Whitridge, Charles A. Gambrill, Thomas W. Levering, Joseph B. Brinkley, and Samuel C. Miles, Esqrs., and we understand that they are not unanimous in the views expressed in the circular.

Amongst the farmers present were Hon. E. F. Chambers, Hon. Edward Wilkins, J. H. Evans, Henry Hollyday, W. Wilson Byrne, M. T. Goldsborough, Gen. Walter Mitchell, G. W. Oldham, W. E. B. Faithful, Col. Samuel T. Harrison, Dr. James Bordley, James P. Weeks, Chas. McCollister, John R. Cavrill, Francis Pascault, Dr. Robt. Wright, James Denny, and James T. Earle.

Having failed to get a copy of the Grain Dealers' Circular alluded to, on application to the Chairman of their Committee, early in the month, a copy, received since from another source, came to hand too late for insertion in this number. We will give it next month. We have to acknowledge the courtesy of the Chairman of the Grain Dealers' Committee, in tendering through us invitations to attend the meeting, to any grain growers in town at the time whose names we might furnish him. Being too modest to suggest our own name as a member of that respectable fraternity, we failed to receive an invitation.

TO MAKE IRON POTS.—Mix finely sifted lime with some white of an egg, till a thin kind of paste is formed, then add some iron filings. Apply this to the fractures, and the vessel will be found nearly as sound as ever.

The White Chester Hog.

Mr. Thos. Wood, of Chester county, Pa., sends us an advertisement of his Chester Hogs, and says "I would be much obliged if you could insert a few words editorially in favour of the Chester Whites." As we cannot do this, but are perfectly willing to have the Chesters fairly represented, we give Mr. Wood's own commendation of them as contained in his letter to us as follows:

"I am fully convinced they are now the most profitable breed of hogs in the Union, and also the most popular. I have shipped of them to fill orders in all the States of the Union except Oregon, and the increased demand for them, as they become known, speaks loud in their favor. I just received an order from an old customer in Augusta, Maine, who says, 'he is now fully satisfied this breed of hogs can be kept in good condition on $\frac{3}{4}$ of the food needed to keep the ordinary hog in the same condition.' I shipped 300 out of this county last year for breeders; they make more pork to the amount of food consumed (and less offal,) than any other breed ever tried amongst us, and fatten readily at any age, and many of them are made weigh over 300 at eight and nine months old. I sent one to your city last week for Augustus Shiver, who says, 'he has as fine a hog (got of me two years ago,) as is to be found.'"

In giving our opinion of the value of the Chester, we acknowledge candidly we have made no such careful comparison with other breeds as should be made, to determine with certainty their value. And this is the difficulty all around we apprehend. Mr. Wood selling them at breeders' prices finds them unquestionably a profitable breed, no matter what the cost of keeping them, and he may judge them too favourably perhaps on this account. They are a good breed to sell, because with full keep they make a good show, grow rapidly, and attain large size. But we should be glad to know from farmers who have had this stock for some years, how they compare with other breeds, and how they maintain their character as stock hogs after they have ceased to get the extra keep and attention of high priced pets. If the Chesters are what is claimed for them, a little discussion of their merits will do them good. If they are otherwise we wish to help our readers to find it out. For our own part the impression made by our own experience with them is, that although they will make a great deal of meat and bone in a given time, they require a great deal of good food to do it with, and that they fail under ordinary treatment on a grain or tobacco farm with plenty of grass. And that the meat when well fed is entirely too coarse for good bacon. We think, moreover, we have spoiled a very good breed of "ordinary hogs" by crossing with them. We repeat distinctly, however, that

these opinions are not based upon a careful comparison with other breeds under the same circumstances; and we should be glad to hear the result of the experience of others.

The Maryland Dog Law.

Our old friend, Mr. Thomas S. Jones, of Baltimore Co., having had occasion lately to hunt up the Law bearing upon dogs for killing sheep, has suggested the probability that few farmers of the State know just what the Law is, and furnished us a copy of it, which we give below as copied from the new code.

Section 1.—If any dog shall be detected in killing or injuring sheep, and proof thereof shall be made by the oath of the owner of said sheep, or any other person being a competent witness, before a Justice of the Peace, the owner of said dog upon complaint to him made, and information of such proof, shall proceed forthwith to kill said dog, and on his refusal or neglect to do so, the owner of said sheep may kill such dog afterwards found running at large, or may apply to a constable, who, upon production of the aforesaid affidavit, shall proceed to the house of the owner of said dog and kill said dog there or wherever found.

Section 2.—If any dog shall immediately upon such complaint and information be killed by his owner, the owner of the sheep shall not have cause of action against the owner of said dog, but upon his refusal to kill such dog, the owner of said sheep may recover double the value of the sheep killed with cost, in the manner prescribed for the recovery of debts.

Great Display of Fine Tobacco.

The Kentucky State Agricultural Society, notwithstanding the great stock interests of that noble State, keeps an eye to her other branches of rural economy. Kentucky is famous for her fine tobacco, and the society wisely encourages active competition among growers in improving the quality of the article, by the offer of very large premiums. We copy the following from the *Baltimore Daily Exchange*:

LOUISVILLE, Ky., May 16.
The display at Pickett's warehouse in this city of 240 hogsheads of tobacco, averaging 1200 lbs. weight, under the patronage of the Kentucky State Agricultural Society, is said to be the largest exhibition of fine tobacco ever witnessed in the world. Tobacco dealers from every section of the Union were present. Premiums will be awarded this afternoon.

Premiums of \$100 each were awarded as follows: To W. R. Wells, of Hart county, for the best hogshead of manufactured leaf. This was sold to S. S. Preston & Co., of Louisville, for 43¢ cents. To G. W. Callis, of Owen county, for the best hogshead of cutting leaf; to William Bradshaw, of Todd county, for the best hogshead of shipping leaf; to A. J. Whipple, of Bracken county, for the best hogshead of segar leaf.

Sale of Mr. McHenry's Stock.

We omitted last month to record the sale of Mr. J. H. McHenry's stock advertised previously in the Farmer to take place in April.

Besides a number of horses sold at various prices and some Suffolk hogs; his list of Devons and Alderneys offered and sold as per catalogue were as follows:

1. *Myrtle*, imported Devon, 7 years old, had failed to breed; upset price \$75—not sold.
2. *Jennie Deans*, 8 years old, Devon Cow, lost her calf night before sale—sold to P. T. Woodward, of Saluda, Va., for \$102.50.
3. *Salvia*, Devon, three years old, to calve in September; upset price \$100—not sold.
4. *Damask*, Devon Heifer, year old; upset price \$50—not sold.
5. *Bravo*, Bull, 18 months old; upset price \$50—not sold.
6. *Marquis*, Devon Bull, 11 months old; upset price \$75—not sold.
7. *Hotspur*, Devon Bull, 6 months old; upset price \$50—not sold.
8. *Charity*, imported Jersey Cow, 10 years old, has failed to breed for several years—sold for \$75.50 to J. W. Dorsey, Esq.
9. *Lady*, 3rd Alderney, withdrawn.
10. *Asia*, 2d Alderney Cow, 9 years old, has slipped several calves; upset price \$75—not sold.
11. *Alice*, Alderney Cow, 7 years old to calve in August; upset price \$125—not sold.
12. *Kitty*, Alderney Cow, eight years old, to calve in August—sold to J. T. Ferguson for \$72.50.
13. *Bonnie*, Alderney Cow, 8 years old, to calve in August; upset price \$75—sold to same gentleman for \$92.50.
14. *Nannie*, two and a half years Alderney Heifer, to calve in May; upset price \$75—sold to Mr. J. F. Thomas for \$76.
15. *Jessie*, Alderney, 4 years old, will calve in August; upset price \$125—sold to E. L. Spalding, Esq., of St. Mary's county, for \$100.
16. *Lassie*, Alderney, 3 years old, to calve in May; upset price \$125—not sold.
17. *Marigold*, Alderney, 4 years old, to calve in June; upset price \$75—sold to Hamilton Easter, Esq., for \$82.50.
18. *Effie*, Alderney, 7 months old; upset price \$50—sold to G. B. Milligan, Esq., of Baltimore county, for \$51.
19. *Dove*, Alderney, 3 years old, to calve in May; upset price \$100—sold to J. T. Ferguson, Esq., for \$110.
20. *Sunflower*, Alderney, 10 months old—sold for \$50 to Charles Ridgely, Esq., of Hampton, Baltimore county.
21. *Merit*, Alderney, 10 months old—sold for \$87.50, also to Mr. Ridgely.
22. *Hector*, Jersey Bull, 2 years old; upset price \$100—not sold.
23. *Figaro*, Jersey Bull, 1 year old, to calve in May; upset price \$90—not sold.
24. *Polled Heifer*, grade Ayrshire, to calve in May—sold for \$35, to G. W. Smith, Esq.
25. *Bride*, grade Devon and Ayrshire, 5 years old—sold for \$51, to P. T. Woodward, Esq.

26. *Grace*, Jersey Heifer, 2 years old; upset price \$100—sold to Geo. Mittnacht, Esq., for \$130.
27. *Saucy*, Alderney Heifer, 13 months old; upset price \$75—sold for \$95, to Wm. Dorbacker.
28. *Wanderer*, Jersey Bull, 14 months old; upset price \$50—sold to G. Mittnacht, for \$53.

Acknowledgment.

PENDLETON, S. C., May, 1860.

To the Editor of the American Farmer:

MY DEAR SIR: You will, I trust, excuse my tardiness in acknowledging my obligations for your kind and polite favor in placing my name on your list of "honorary members" of the craft editorial who have retired from the field, and in forwarding to me, free of charge, your old and excellent paper, the American Farmer, which I have read since 1830, when I commenced with vol. 12, then edited by Gideon B. Smith. I trust I shall not be your debtor however, *only*, in respect and gratitude for your kindness.

The suggestion made to you, and which you publish in your last (May) number, with the word "country" editor—instead of *agricultural* editor as I intended—was not that I desired to beg the favor as applicable to myself, but for the better reason, that I thought it a matter worthy the consideration of our honored fraternity of agricultural editors.

My friends whose names I recently sent you are much pleased with the "Farmer," and will, no doubt, continue not only to be your subscribers—but paying subscribers.

Very truly, your friend, S.

P. S. For the information of your correspondent, M. D.—(p. 327, May No.) I send you an extract or two on the subject of "roup" in fowls, which I presume is the disease that has proved so fatal in his flock. *First*, as you may not have the volume by you to refer to, I extract from the *Albany Cultivator*, vol. 5, p. 146.

"ROUP IN POULTRY.—This disease frequently called in this country "swilled head," attacks both common barn-yard fowls and turkeys. The first symptoms are a watery fluid being discharged from the eye. The eyelids soon become inflamed and swell; and the swelling extends more or less over the head. A fetid discharge proceeds from the nostrils, which so obstructs respiration that the fowl is constantly sneezing and gasping. In bad cases one or both eyes are frequently destroyed. The disease is believed to be contagious, and as soon as a fowl is affected, it should be removed to some dry and comfortable place where there will be no liability of the malady being communicated to others. If many fowls are affected, it will be advisable to remove the whole of them, and wash their apartments with a strong wash of hot lime. A writer in an English *Agricultural Gazette*, recommends as the best remedy, bathing the head with warm fomentations in which poppy-

heads have been infused, and giving a preparation of goose-grease (lard would probably do as well,) and chopped rue mixed together—two teaspoons for a fowl twice a day. For drink, the fowls are allowed water which has iron or iron-rust and sulphur in it."

In "Dixon's *Treatise on the History and Management of Ornamental and Domestic Poultry*," I find a similar description of the disease "*roup*." After stating "it is a disease of the head," &c., he says, "a copious and offensive discharge flows from the nostrils, in bad cases, from the eyes also; indeed, the whole head occasionally seems to suppurate. The creature is stupified by suffering and blinded also by the disorder. All that can be done is to keep it in a warm dry place, to wash the head frequently with warm vinegar and water, to cram the bird with nourishing food when it cannot see to eat, and protect it from the cruelties of the other fowls. A solution of sulphate of zinc, as an eye-water, is a valuable cleansing application. Rue pills and a decoction of rue, as a tonic, have been administered with apparent benefit. Cleanliness, warmth, dryness, and good feeding will, in a measure, keep off the evil."

By a search through my agricultural library, I might give you much more on the subject, but presume the above is sufficient. We had a few years since a very fatal disease among our fowls, chickens, ducks, and turkeys. Many fell from their roosts dead, others were more gradually attacked—with a staggering and reeling at first, and after, unable to stand, would sit apparently asleep with their heads on the ground, sometimes for hours, if not relieved, before they died. The most successful remedy was pills composed of soft soap and corn dough, given frequently with sulphur and copperas water as a drink. S.

Col. J. W. Ware, of Clarke county, Va., has been elected President of the Valley Agricultural Society, which holds its annual exhibitions at Winchester. We find in the *Berryville Conservator* an earnest address by the Colonel, calling on the citizens of the counties around, and making especially a gallant appeal to the ladies to use their influence in sustaining so useful an institution.

Speaking of the advantages of the annual exhibitions and their influence on the improvement of the breed of horses and other stock, he uses the following language:

Loudoun distinguishes herself in saddle horses—selling one high enough to buy three or four work horses, and at no more cost of raising. No doubt she as well as other counties can render equally as good an account of the benefit of agricultural exhibitions, but I have not the facts.

All know that years past, the fever, the fashion, was to purchase everything in the stock line at the North—(is there not still too much of it?) And many are the impositions that have been practised upon the South. But how is it now? The tide has been stayed or turned. Many Southern men look to Virginia for their supply. My dealings show also many Northern, Eastern and Western customers. I have customers and correspondents from California, Canada, Oregon, Salt Lake City in Utah, and other distant parts; as no doubt have other importers of the other classes of animals. And if we can concentrate the trade for blooded animals, both North and South, on our region of Virginia, who can calculate the amount of money that will flow into, and not out of, our community?

If we are strict in our decisions on blood, purchasers will feel confidence in the purity of the blood of the animals they seek from us, and their interest will give us their custom.

What part of the world, in climate and products, is better suited to such purpose than this? If farmers will do their duty, can any man doubt that this can be brought about by competition at our agricultural fairs? Great as this is, is this all the benefit to be derived from it? Is it no benefit to the farmers to be drawn together and become acquainted with each other? Farming is the business of all others least calculated to create suspicious feeling and consequently most open to imposition—which may be materially corrected, if not entirely, by farmers meeting together at agricultural fairs, and consulting, and examining implements and articles together.

Mulching with the Field Pea.

We copy the following article from the little work on Grape Culture recently published by Mr. Bright, of the Logan Nurseries, near Philadelphia. We had suggested before seeing it, and designed to put in practice the idea, this season, in a portion of a young peach orchard. We know no plant so well adapted to the purpose of mulching as the pea, and are glad to learn it recommends itself, on trial, to so experienced a cultivator as Mr. Bright.

Under the system of shallow planting recommended in this work, it is indispensable that the soil of vineyards and grape borders should be constantly mulched, especially in summer; and indeed under any system of planting in any part of the United States where the Catawba will ripen, it will be found highly useful to shade the ground in some way from the direct rays of the sun, in July and August. Any kind of litter will, of course, answer this purpose; charcoal, or tan composted with lime, would be very good; but the best mulch, beyond all question, would be the leaves of trees.

To mulch an acre of vineyard with any of these substances effectually, would cost almost as much as to manure it with the best of fertilizers; and hence we can scarcely expect it will be done unless some cheap means of accomplishing this object can be suggested.

One very cheap and efficient means of mulch-

ing a vineyard, which we have practised to some extent and find quite satisfactory, is to plant in a drill between the rows of vines, the Southern Field Pea or Cow Pea, a leguminous plant very much employed in Virginia and other Southern States, as a green crop to renovate worn-out soils, by ploughing under while in flower. This plant will grow in any soil, if supplied with lime, and will endure the severest drouth without flagging. It sends its roots very deeply into the sub-soil, and obtains the larger portion of its nutriment from the atmosphere. It has a stalk almost as large and firm as that of a tomato vine, and spreads widely over the surface of the ground. In ninety days it produces as much mulching material, and as much green matter of tops and roots, for manure, as an acre of good clover, and of precisely the same character and value, either for manure or food. It is well known, we presume, to all intelligent readers of modern agricultural literature, that the stalk and vine of the pea is richer in nitrogen, (or ammoniacal substances,) and alkaline salts, than the best of wheat or rye straw, and hence must form a very valuable material for mulching or manure.

Our method of planting the pea is this: we cultivate the spaces between the rows of vines very lightly with the horse-hoe, in the spring, and about the first of June open a very shallow furrow with a small plough, in each space, and drop the peas in this furrow or drill, so as to form hills about two or three feet apart in the drill, say ten or fifteen peas in a hill, and cover with the plough or hoe. Afterwards cultivate a little to keep down weeds, just as you would ordinary peas or corn. It takes about half a bushel, or less, of seed to plant an acre of vineyard in this way, and the seed costs about \$1.25 per bushel in Baltimore.

This pea vine make a very perfect shade for the roots of the grape, while growing, during July and August, and when cut down, just as it comes into flower, in the early part of September, furnishes a large quantity of valuable litter for mulching and manure. It does not exhaust the soil, because it returns to it more of carbon and nitrogen than it abstracts from it; and it only takes potash, lime, &c., from the sub-soil, to return it to the top-soil in a state better fitted for the food of plants. We have used the kind of pea known as the *clay*, or *cow* pea, and also the *black eye* pea. The *early black* is said to be the best for a northern climate.

We consider this method of mulching vineyards very economical, and amply sufficient to protect the roots of vines from excessive heat and drouth. Since we commenced this practice, we have learned that a similar method of mulching has been employed in France for many years. In Reddings Treatise on Modern Wines, published in London, in 1833, he states that, "In some parts of France, *lupines* (a kind of pea) are sown among the vines, and buried when in flower around their roots, where they decay; a practice found to be of singular utility to the crops." Again, he says, of vineyards in the island of Madeira, "some growers use animal manures, which others reject, and as the French do, they sow *lupines* among the vines, and bury them at their roots."

In some of the letters written by Mr. Long-

worth, of Cincinnati, on the rot in grapes, he states that in several instances, vineyards which were planted on dry porous soil, and accidentally mulched with weeds, escaped the rot, while vineyards in the immediate vicinity, which were kept clean, and not mulched, suffered severely. These passages will be found in Mr. Buchanan's work on the grape.

Influence of Air on the Soil.

Unquestionably, the greatest modern improvement in European and American agriculture is *drainage*. No one can have read the many evidences of the astonishing results, following the practice of drainage, that have appeared from time to time in the columns of the *Ohio Valley Farmer*, without being convinced that the matter is well worthy the attention of every tiller of the soil.

But one of the causes that conspire to produce those remarkably ameliorating effects that we see upon drained ground, has been too much overlooked. We can realize the importance of getting rid of stagnant water and of promoting warmth to the soil, which are two of the results of drainage, but there is another influence at work whose effects are still greater. *This is the influence of the air on the soil.*

Some have wondered why ground that is not swampy, common upland, should be so greatly improved by drainage. The subject of the present article we think will explain the reason.

It has, indeed, been found that ALL clay soils are greatly improved by drainage. A clay soil seems to have, in a remarkable degree, power to extract fertilizing properties from the air. But only a small portion of an *undrained* clay soil is exposed to the air. Its nature is to become more and more compact, if uninfluenced by any disturbing cause, and consequently the air only comes in contact with the surface, except in a very limited degree.

The astonishing crops which have been taken from some fields that have been thoroughly sub-soiled, offer a striking proof of the advantages of *letting in the air*. A thorough loosening of the ground to the depth of fourteen or sixteen inches, exposes a great quantity of soil to the atmosphere. Sub-soiling, indeed, is a very good substitute for drainage of upland—only the good effects of the former will be temporary compared with the permanent benefits derived from the latter.

When water percolates down through the soil, in a drained field, air accompanies the water in its passage. Besides, the loose, honey-comb arrangement of the particles of the soil, where drains have been laid, affords a constant inlet to the air. But in addition to these methods of finding a way to the different particles of soil, the tiles themselves afford an entrance to an immense quantity of air. Hold a lighted candle in summer time, at the outlet of a tile drain, and it will be found that a steady current of air is all the time setting inward. Many thousand gallons of atmosphere are thus brought in direct contact with the under soil, freighted with rich ammonia and carrying moisture to the roots of vegetables even in the driest time.—*O. Val. Far.*

Fish Culture.

Read before the Davidson County Agricultural and Mechanical Association.

Since the discovery of what is called the artificial propagation of fish by two German peasants some seventeen or eighteen years since, many experiments have been made, with success, in France, England, Scotland, Canada, and in parts of our own country, all of which aid to establish the fact the finny tribe like animals and fowls which were created to serve the purposes of man are equally susceptible to improvement and increase by a proper understanding of their habits and a little timely attention. Indeed from the wonderful productiveness of the fish tribe, and their thriftiness under ordinary favorable circumstances, it may be safely inferred that with the same amount of outlay of money and labor there will be a larger remuneration than from any other legitimate source of income to the Agriculturist or Horticulturist, and in order that this may not be regarded as too extravagant an estimate the following facts are brought forward.

We have it from the best authority that the number of eggs deposited in a season by a Salmon is about 40,000, and I make no doubt but the number is almost always much larger. The Pike and some others deposit in some instances as many as five or six or more millions. But a few days since I procured the spawn of a Jack fish taken from our own waters which contained 115,000 eggs, and I was informed by a gentleman that he had taken from a Jack three pounds of spawn and by applying the same rule to that amount which was applied to the other it would make the number it contained about 172,000. The Trout being the favorite fish in our waters, and the one which most generally would be preferred to experiment with in ponds, will be selected to illustrate the profits of fish culture. The number of eggs in the spawn of a well grown Trout may be safely put down at 40,000, of this number one half may not be impregnated or may be devoured by Seavenger or Game fish leaving 20,000 to turn out each its little presentiment of the parent Trout. Of this 20,000 little fish not more than 10,000 will remain in existence at the end of one year, except perhaps under the most favorable circumstances such as placing them in a separate department and excluded from all larger fish.

The remaining 10,000 at this time will, if they have been well cared for, weigh between five and ten thousand pounds. At the end of two years the destructive causes continuing to act will leave not more than five thousand and at this time they weigh from one and a half to two pounds each, and will command readily in our market the price of ten cents a piece, making the neat little sum of five hundred dollars for the produce of a female Trout in two years. These facts with reference to the growth of fish, &c., have been collected from various sources and from the facts the inferences drawn are by no means preposterous, although so far as we know no single fish has ever caused to be realized so large a sum, and in all probability never will, yet the entire practicability of the matter is such as to awaken our attention and efforts as Agriculturists and utilitarians and lovers of beauty, to this interesting and lucrative branch of study and experiment.

The peculiar advantages presented, by our

country generally, to this branch of experiment, and a rapidly increasing population and with it increased price of food, together with a cheap supply and a small variety of the best fish, render it a matter of no little import, that we should do something to increase and keep up that supply of fish-food which actually militates against no other supply and which no other can replace or be afforded at such cheap rates.

Throughout the whole extent of this and the adjoining counties, every few miles presents to view a site or sites for artificial ponds, most of which could be made available to this purpose with a trifling outlay. And indeed when we consider the convenience of ponds of water, for the many uses to which they may be made to contribute, and their wonderful contribution to the beauty of the scenery wherever they may be located, we would have plea sufficient for their construction.

A pond covering not more than half an acre and with an average depth of four feet, supplied by a stream of fresh water, would be all sufficient for the successful rearing of fish. A few precautions only are necessary in the construction of a pond.

The site being selected, the excavation should be made to such extent as the location may admit of, or the fancy of the individual should suggest, down to the rock of it, be in reasonable depth, or at any rates not less than four feet, the deeper however the better. The embankment should be so constructed as to contain all the usual flow of water from the fountain head, as well as any additional quantity which it may receive from heavy rains, and should be closely packed and well sodded over the whole surface to within twelve or eighteen inches of the water level. It should not only be constructed with a view to holding the water within, but also to prevent the washings from without and should always, when the land around is higher than the water level, be backed by a drain sufficiently large to convey all the surface water from the surrounding land. This arrangement prevents the breaking of the embankment, the filling of the pond with trash and soil and also inundations which might convey away the fish.

From the edge of the sod above mentioned, the bank should slope at such angle as to allow loose broken stone to lay with its own weight, or which is much better it should be covered from the bottom up to the sod with stone built rip-rap fashion. Some such arrangement as this is actually necessary to prevent the constant wearing away of the banks by the ripples.

The inlet to the pond, if the fall and the distance from the spring will admit of it, should have a gradual fall and a gravelly bottom and the water in it, should have sufficient depth to cover well the fish when they seek this place, as they always will, in spawning time. Along the inlet if it is fifty or more yards long on either side, several pits or small ponds should be dug from six to ten or more feet square, and deep enough for the fish to hide themselves in when frightened from their spawning beds.

The outlet must needs be large enough to let pass freely all the water that runs from the source and should be kept covered by a wire work strain with meshes small enough to prevent

the escape of the small fry. These meshes need not however be smaller than a half or three quarters of an inch, for the reason that the fish are not apt to seek another habitation until of such size as not to be able to pass them.

Fish ponds besides being receptacles for our own best fish, may be made the means of stocking our waters with the choicest fish of the Northern lakes of this country, or even with those of Europe.

Spawn may, with great facility, be conveyed to every part of the United States, and since the discovery of artificial propagation, many ingenious plans of conveying the spawn have been proposed and in a great many instances with entire success, has been practised upon. It only now remains for gentlemen to exchange the spawn of different kinds of fish, just as they do garden and field seeds.—*Southern Homestead.*

Timothy.

The great value of the Hay Crop and the importance of correct knowledge with reference to the character of the plants we cultivate, induces us to publish again the following observations on Timothy first published by Professor Kirtland, of Ohio. We copy as we find the article quoted in Flint's Grasses and Forage Plants:

1. That Timothy grass is a perennial plant, which renews itself by an annual formation of "bulbs," or perhaps, more correctly speaking, tubers, in which the vitality of the plant is concentrated during the winter. These form in whatever locality the plant is selected, without reference to dryness or moisture. From these proceed the stalks which support the leaves and head, and from the same source spread out the numerous fibres forming the true roots.

2. To insure a perfect development of tubers, a certain amount of nutrition must be assimilated in the leaves, and returned to the base of the plant, through the stalk.

3. As soon as the process of nutrition is completed, it becomes manifest by the appearance of a state of desiccation, or dryness, always commencing at a point directly above either the first or second joint of the stem near the crown of the tuber. From this point the desiccation gradually progresses upwards, and the last portion of the stalk that yields up its freshness is that adjoining the head. Coincident with the beginning of this process, is the full development of the seeds, and with its progress they mature. Its earliest appearance is evidence that both the tubers and seeds have received their requisite supplies of nutrition, and that neither the stalk nor the leaves are longer necessary to aid them in completing their maturity. A similar process occurs in the union just above the crown of the bulb, indicating the maturity of that organ.

4. If the stalk be cut from the tubers before this evidence of maturity has appeared, the necessary supplies of nutrition will be arrested, their proper growth will cease, and an effort will be made to repair the injury by sending out small, lateral tubers, from which weak and unhealthy stalks will proceed, at the expense of the original tubers. All will ultimately perish either by the droughts of autumn or the cold of winter.

5. The tubers, together with one or two of the lower joints of the stalk, remain fresh and green during the winter, if left to take their natural course, but if, by any means, this green portion be severed, at any season of the year, the result will be the death of the plant.

From these five propositions the following conclusions are drawn:

1. That Timothy grass cannot, under any circumstances, be adapted for pasture; as the close nipping of horses and sheep is fatal to the tubers which are also extensively destroyed by swine if allowed to run in the pasture.

2. That the proper time for mowing Timothy is at any time after the process of desiccation has commenced on the stalk, as noted in the third proposition. It is not very essential whether it is performed a week earlier or later, provided it be postponed till that evidence of maturity has become manifest.

3. All attempts at close shaving the sward should be avoided, while using the scythe, and in gauging mowing machines, care should be taken to run them so high that they will not cut the Timothy below the second joint above the tuber.

I have frequently, during the past autumn, pulled up the bulbous roots of Timothy, from the stubble from which a heavy crop had been cut with the scythe, while in flower, for the purpose of studying the changes which were taking place in these tubers, and have found them very much as described above, not only on moist, damp soils, but also on soils comparatively dry. Any farmer can satisfy himself of the correctness of these representations by a little observation in his own fields; and as the point is of practical importance, it is worthy of careful attention.

The facts above alluded to have fallen under the observation of a practical farmer of Middlesex county, who says: "The proper time to cut Herd-grass or Timothy, is after the seed is formed and is full in the milk. It will then give about twenty per cent. more weight than when it is just coming into the blossom, and the cattle will eat twenty per cent. less and keep on their flesh. And I prefer also to cut it at that stage of its growth on account of the roots being better able to withstand the drought. It should be cut four inches from the ground, as most of the Timothy is killed by mowing close and early before it has come to maturity. I have kept Timothy thick and strong in the land six years, by following this method. I have noticed that most of it has died out by once or twice close and early mowing before the grass has come to maturity; if it is dry weather it is sure to die when so cut. I lost a whole field of it by mowing too close and early, and I consider the four inches at the bottom of coarse Timothy of little value."

If the seed is allowed to ripen it exhausts the soil far more than if cut in the blossom.

The repose of the passions must not imply their stagnation. They must rouse themselves at last and go forth, if only to bear a burden and be baffled by defeat. Successful or baffled, their duty is in the struggle. The struggle itself is the life.

Breadstuffs.

The table following shows the quantity of breadstuffs exported from the various ports of the United States to Great Britain and the Continent, from Sept. 1st up to the present date for the year 1859-60, and three preceding years:

Exports of Breadstuffs from the United States to Great Britain, Ireland and the Continent, from Sept. 1 to date, for the years following:

Year.	Flour, bbls.	Meal, bbls.	Wheat, bush.	Corn, bush.	Rye, bush.
1856-57...	963,460	184	9,164,663	3,243,738	157,254
1857-58...	846,951	123	3,505,328	1,344,867
1858-59...	124,974	20	498,498	331,039
1859-60...	236,228	...	517,360	29,546

From this statement, it is apparent that the aggregate export of Breadstuffs for the current year is somewhat below that of last. Under the head of flour, there is an increase of 111,254 barrels, and the exports of wheat shows an excess of 18,862 bushels; but the decrease on corn is 301,493 bushels. As compared with the years 1856-7 and 1857-8, the falling off is immense. In 1856-7, the quantity of flour shipped was more than that of the present year by 727,232 barrels; of wheat, 8,647,303 bushels; and of corn, 3,214,192 bushels. The decrease of this year, as compared with 1857-8, is on flour, 610,723 barrels; on wheat, 2,988,968 bushels; and on corn, 1,315,321 bushels.

The cause for this remarkable decline in grain and flour exports is attributable to the absence of an active demand from abroad. The British market has been supplied with a fair home crop, and its deficiencies have been made up to a large extent by imports from European countries, thus leaving our own produce to the chances of speculative shipment, which, depressed as our great grain-growing section has been, have not been sufficient to induce any extensive consignments. The yield of the last crop was but little under an average, and there must, therefore, be a considerable proportion of the season's produce still in the hands of the farmers and the grain merchants, waiting for more favorable chances of export. The anticipations of an extensive export have been disappointed, and those who based thereon an expectation of a revival of the Western trade this spring have found their calculations mistaken. Whilst the action of the grain holders in keeping their produce out of the market has tended to check the immediate recovery of the West, it yet shows favorably, that they should be able to hold their stock, instead of forcing it upon the market at depreciating prices. It is to be remembered, however, in comparing the movements of the present year with those of 1856-7 and 1857-8, that those years were quite exceptional in the history of the trade, the exports being for the former \$55,624,832, and for the latter \$33,698,490. The lower aggregate value of 1857-8 was caused not so much by the export of a less quantity of produce, as by the lower prices ruling during that period; the average price of wheat flour during 1856-7 was \$6.23, whilst during 1857-8 it was only \$4.73—a decrease on the former year of about 33 per cent. Making, however, all allowance for this circumstance, there is every prospect that the export of breadstuffs for the current year will fall below an average, and that at the close of the grain year there will be a large amount of produce in the hands of Western dealers.—*U. S. Economist.*

Breaking Colts.

MESSES. EDITORS: I read with pleasure your sensible remarks under the above heading in the last number of the *Ploughman*, and with your permission will add a word upon the same subject.

It is my practice to halter-break my colts as soon as they are weaned from their dams and housed for the winter; sooner than this, it is inconvenient to do it, unless the mare is used while suckling her colt, which I think may be done with impunity providing she is gently driven, and not heated—but I must confess to a prejudice against working breeding mares, and seldom harness them; the temptation to *over-work* is too great.

In commencing with the young colt after the halter is on, it is wrong to fasten him to anything; it only offers him an opportunity to *try his neck*, and will end in the colt straining his eyes nearly out of his head, or breaking the halter, thereby teaching him, in either event, the vexatious habit of pulling upon his halter, a habit never forgotten, and only remedied by ever after having at hand a halter and a post, stronger than the animal's neck.

The right way to begin with the colt, is to take the strap of the halter in the hand, and lead him gently round his loose box, always talking to him, and patting him—if he pulls, "pay out," letting him feel only the weight of the hand; he can then neither rear, nor throw himself, but will still be tied. This gives him no chance to try his strength, as it would if tied to a post, and it will never enter his head to do so.

In breaking colts of any age, *whip but little*; "spare the rod and spoil the child" applies to *boys*, but not to *colts*. You can whip the *temper in*, but not *out*. *Patience and kindness* should be the rule, and no man who cannot control his temper should ever touch a colt.

In breaking to harness, if the colt appears obstinate, attempts to kick, or does anything wrong, don't whip him, but stop, jump out, raise the collar and see if the hard leather is not galling his tender skin; look to his mouth, and see if the bit is not chafing it: then to the straps and strings, that none of them hit against him, and I will guarantee a *cause* will always be found for his bad behavior.

I have in my mind a case to the point. Not long ago, I commenced breaking a five year old colt—high spirited and high blooded, but of mild and gentle disposition. He would stand quietly to be harnessed, but no sooner did I give the word to go, than he would double up his back and commence to jump, rear and plunge, requiring the strength of two men to hold him.

Day after day I looked in vain for the *cause*—he would continue to do the same every time he was driven. At last, one evening after a severe struggle with him, and after almost making up my mind to lose my temper, the *cause* flashed upon me; the *girths* were too tight. Since then I have had them buckled very loosely, and my colt has been as submissive and docile as a child.

I intended to say something of *loose boxes* for horses, but am aware how editors, and readers too, avoid long dry articles, and forbear. I dislike to raise the temper in man or beast.—*Correspondent of Ploughman.*

SUNDAY READING.

With silent awe I hail the sacred morn,
Which slowly wakes while all the fields are still;
A soothing calm on every breeze is borne,
A graver murmur gurgles from the rill,
And echo answers softer from the hill,
And softer sings the linnets from the thorn—
The skylark warbles in a tone less shrill,
Hail! light serene: Hail! sacred Sabbath morn,
The rooks float silent by in airy droves;
The sun a placid yellow lustre shows;
The gales that lately sighed along the groves
Have hushed their downy wings in sweet repose;
The hovering rack of clouds forgets to move;
So smiled the day when the first morn arose.

It is not lawful for a Christian to sue his brother at the law, unless he can be patient if he loses, and charitable if he be wronged, and can prosecute his end without any mixture of covetousness, or desires to prevail without envy, or can believe himself wrong when his judge says he is, or can submit to peace when his just cause is oppressed, and rejected and condemned, and without pain or regret can sit down by the loss of his right, and of his pains, and of his money. And if he can do all this, why need he go to law? He may, with less trouble and less danger, take the loss singly, and expect God's Providence for reparation, than disentitle himself to that by his own forwardness, and take the loss when it comes laden with many circumstances of trouble. But, however, by accident it may become unlawful to go to law in a just cause, or in any, yet, by this precept we are not forbidden to go to law for revenge we are simply forbidden, that is, to return evil for evil; and therefore all those suits which are for *reductive sentences*, not for reparation are directly criminal.

Let the love of God be thy motive; the will of God thy rule; the honour and good pleasure of God thy aim. If thou dost this, then thou "walketh before God, and art perfect."

How wise and holy are Thy commands, O Lord! how sweetly enforced with fit, and evident, and familiar arguments. Be Thou my sovereign king, O! glorious Jesus! Be Thou my soul's direction forever. Thou tellest me my duty, and enablest me to do it; Thou settest me to work, and promisest me a rich reward. O! make me merciful; O! make me perfect as Thou art; then shall I love, and delight in Thee forever!

Alms-giving, prayer, and fasting, are the three especial Christian sacrifices; the first, out of our estates, the second, of our souls, the third from our bodies, which are the principal parts of a man. Every one therefore being obliged to pay its tribute of acknowledgment to the Creator.

Hypocrisy is a most insidious mischief, a subtle poison, a venom within; a blot upon all virtue,

a canker to all sanctity. By a cruel contrivance of its own it employs virtue to destroy itself; fasting it annihilates by fasting; prayer it nullifies by prayer; mercy it defeats by mercy.

Humility is the guardian to all virtues.

The true Christian's chief care lies in right ordering and commanding his own spirit; for where the hypocrite's work ends, there the true Christian's work begins.

Acts of worship are to be unto God, and for God consider them, not the manner only, not the object only, but the end in prayer. It is not enough to make God the object of the prayer; He must be the end also.

That the same prayers be repeated often, is not censured by our Saviour, but our placing of our devotion in the bare repetition.

The following advertisement was handed us after our advertising sheets were entirely occupied, and would have shared the fate of others in being excluded—but by particular request, and as a matter of accommodation, it is inserted here, not for *Sunday reading*, but because it could go nowhere else. We hope some one reader at least will be benefitted by being put in the way of purchasing a fine estate:

FOR SALE.

ONE OF THE BEST FARMS IN MARYLAND FOR THE GROWTH OF FRUIT TREES, GRAIN, VEGETABLES, &c.

"Sprigg's Point Re-surveyed," commonly known as "Sparrows' Point Farm," containing 577 Acres. Upward of 400 acres are arable, and are divided into 5 fields and 3 large lots of highly improved and productive lands; the balance is wood land, containing valuable Wood and Timber, and affording, with the river shore, extensive pasturage for stock of all kinds. The Farm is in Baltimore county, Md., on the north side of the Patuxent River, and nearly surrounded by it on the north and west and the Bay Roads on the east and south, within 7 miles by water, and 13 by land, of the city. It has an extent of clean, hard shore or water line of more than 4 miles, with navigable water all around to within 80 or 200 yards of the shores. For healthfulness, quality of soil, beauty of location, and, above all, for large resources for the highest improvement, it is unsurpassed. Oyster-shell banks and sea oars or seaweed abound in quantities more than sufficient to cover all the cleared land with each, every year, at small expense.

It has a convenient and comfortable Dwelling, with large and ample Out-Buildings for all the purposes of a large Farm in good order. For still more full particulars, persons wishing to purchase, on application to the subscriber will be furnished with printed Circulars, containing the plot of the Farm, with a detailed description of same.

The Terms, after the first payment, will be easy. Purchasers are invited to come and examine for themselves. The undersigned or the Manager on the Farm will show the premises.

If not sold before, the Farm will be offered at Public Auction, at the Sales Room of the Exchange, in Second street, in this city, at 1 o'clock, P. M., on TUESDAY, the 26th of June, and will positively be sold to the highest bidder.

DR. JAS. BORDLEY, 39 Lexington St.,

Or to JAS. R. CHANCE, Auctioneer,
No. 210 W. Baltimore St., Baltimore.

Wholesale Produce Market.

Prepared for the American Farmer by ELLICOTT & HEWES, Produce and Commission Merchants, 59 Exchange Place.

BALTIMORE, May 21, 1860.

BUTTER.—Ohio, in brls. and kegs, old, 9 to 10; Virginia and Pennsylvania, in kegs, new, 14 to 16; Glades, new, 16 to 18; New York or Goshen, 18 to 20; Roll 14 to 18.
BEEFWAX.—37 cts.
CHEESE.—Eastern 12, Western 11.
DRIED FRUIT.—Apples \$1.40.
EGGS.—In barrels, 12½ cents per dozen.
FEATHERS.—47 to 48 cents for good Southern.
HONEY.—In the comb, 14 cents per pound.
LARD.—Bril. 11½, kegs 12½, jars and other country packages, 12 to 12½.
TALLOW.—11 cents.
WOOL.—Unwashed 24, tub washed 35, pulled 31, fleece 45 cents.

Baltimore Markets, May 21.

COTTON.—The demand continues limited to the wants of manufacturers—sales are being made of Ordinary to good Upland and Gulf at from 7 to 12½ cents, six months. We quote prices as follows:

Grades.	Upland.	Gulf.	Western.
Ordinary.....	8 a 9	8 a 9	8 a 9
Low Middling.....	10 all	10½ all	10 all
Middling.....	11½ all 11½	12½ all 12½	11½ all 11½
Strict Middling.....	11½ all 12	12½ all 12½	11½ all 12
Good Middling.....	12½ all 12½	12½ all 13	12½ all 12½
Middling Fair.....	12½ all 12½	13 all 13½	12½ all 12½

FISH.—The market continues inactive. We quote prices as follows: Mackerel, \$9.50 to \$10 for medium; \$11 to \$11.50 for large No. 3; \$17 to \$17.50 for No. 1.—Alewives, \$3.75 to \$4. Southern Herrings, \$6 to \$6.50 for short and full brands; Shad are scarce and are selling at \$11.50 to \$12 per brl.; Eastern Herrings \$3 to \$4.25; Labrador \$4.25 to \$4.50.

FLOUR.—We quote Howard street Super, \$6; Extra, \$6.75. Ohio Super, \$6; Extra, \$6.75. City Mills Super, \$6; Extra, \$6.75. Family Flour, \$7.25 to \$7.50 for the different brands; very choice brands, \$8.25.

Rye Flour and Corn Meal.—We quote Rye Flour at \$4.50. Corn Meal at \$3.62½ per bbl.

GRAIN.—The receipts of both Wheat and Corn are large. Red Wheat, \$1.30 to \$1.40 for fair to choice. White, \$1.45 to \$1.55, for good to prime, and \$1.60 for fancy lots.

Corn.—We quote white at 73 to 75; yellow 70 to 73 cts.

Oats.—Maryland and Virginia, 40 to 43; Pennsylvania, 45 to 47 cents.

Rye.—Maryland and Virginia, 90; Pennsylvania, 93 to 95 cents.

Mill Feed.—Brown stuff, 22 to 23; middlings, 35 to 37 cents per bushel.

POTATOES are selling at 50 to 75 cts. per bushel, according to quality.

PEAS AND BEANS.—Black-eyed Peas, \$2.50 for two bus. bags. Beans, \$0.90 to \$1.25 per bus., as in quality.

PROVISIONS.—Bacon.—Shoulders, at 8½, and Sides at 10½ cents per lb.

Bulk Meat.—Shoulders 7½; Sides 9½ cents per lb.

Pork.—Mess, \$18; Prime, \$14.75. Rump, \$14.

SEEDS.—Clover seed, \$4.50 to \$4.75. Timothy, \$3.50; Flaxseed, \$1.35 to \$1.45 per bus.

SALT.—Turks Island, (except in cargo lots,) 20 cents per bushel.

TOBACCO.—There is an active demand for Maryland Tobacco, and all desirable qualities find a ready sale at full rates, common descriptions, however, are neglected, and only occasionally taken with the better sorts. We still quote frosted Maryland at \$2; ground leaf at \$3 to \$7; common at \$2.50 to \$3.50; middling, \$4 to \$4.50; good middling, \$5 to \$5.50; good leaf, \$6 to \$6.50; and fine at \$7 to \$12. There is a moderate demand for Ohio Tobacco. There are but small transactions in Kentucky Tobacco. We continue quotations, viz: common lugs at \$4.25 to \$4.75; good do. at \$5.25 to \$5.50; inferior leaf at \$5.75 to \$6.25; good do. at \$6.50 to \$7.50; fine at \$7.50 to \$9; choice at \$10 to \$12; and rich heavy Kentucky at \$7 to \$12.50. During the past week there were inspected 1,577 hhds. Maryland; 968 hhds. Ohio; 13 hhds. Kentucky, and 3 hhds. Virginia.—Total 2,561 hhds.

GUANO AND OTHER FERTILIZERS.—Prices continue without change. We quote Peruvian at \$61 to \$62 per long ton,

according to quantity—the latter being for a single ton and upwards. For less than a ton, at the rate of \$56 per ton of 2000 lbs.; California or Elide Guano, \$50 per long ton; Manipulated, \$47; Super-Phosphate, \$45; Mexican A.A., \$20 to \$22; Mexican A., \$16; American Guano \$40 per ton of 2240 lbs.; Sombbrero, \$32 per long ton, and Colombian \$40. Navassa Guano, finely ground, \$25 per ton. Ground Bones, \$27 per 2000 lbs. Plaster, \$1.25 per brl.

GINSENG.—70 to 75 cents per lb.
HIDES.—Country slaughtered, 9 to 9½; dry do. 14 to 15 cents.

HOPS.—14 to 15 cents per lb. for new crop.
HAY AND STRAW.—Hay, \$18 to \$19 for baled, and \$17 to \$18 per ton for loose. Straw, \$12 to \$14 for rye, \$13 per ton for oat, and \$7 to \$8 for wheat.

CATTLE MARKET, May 17.—Beef Cattle were in fair demand to day, although the market for them was by no means active. The offerings at the scales reached 500 head, against 650 head last week, 100 of which were driven to Philadelphia, 25 were left over unsold, and the remaining 375 head were taken by Baltimore butchers at prices ranging from \$4 to \$5.25, averaging \$4.62½ per 100 lbs. gross.

HOGS.—Hogs are dull and rather heavy. They are selling at \$7 to \$8 per 100 lbs. net, but very few are bringing the outside figure.

SHEEP.—Sheep continue to droop, and we quote them this week as ranging from \$3 to \$4.25 per 100 lbs. gross.

NEW ADVERTISEMENTS.

Brower & Co., A. (New York).—Water-Proof Composition.

Bibb & Co.—Store Warehouse.

Bordley, Dr. James—Farm.

Cromwell, Richard—Removal of Store.

Cromwell, Richard—Agricultural Warehouse.

Dingee & Co., W. W. (York, Pa.)—Threshing Machine.

Dobson & Co., Geo. H.—Sash Factory Work.

Goldsborough, Martin—Atkin's Self-Raker.

Greenway & Co., J. Henry—Rhodes' Super-Phosphate.

Fowle & Co., (Alexandria)—Soluble Phos. Peru. Guano.

Merryman, John—Herefords.

Moore & Co., J. J. (Norfolk)—Farm and Fishery.

Norris, Thomas—Manny's Reaper and Mower.

Norris, Thomas—Winship's Refrigerator.

Porter & Irwin—Healing Springs, Virginia.

Reese & Co., John S.—Analysis of Phos. Peru. Guano.

Redmond, Wm. (New York).—Jersey Cattle.

Redman, T. C.—Norfolk.

Sinclair & Co., R. Jr.—Stetson's Maryland Harvester.

Sinclair & Co., R. Jr.—Corn and Tobacco Cultivator.

Sinclair & Co., R. Jr.—Grain Cradle, Horse-Power, &c.

Spear & Forney—McCormick's Reaper and Mower.

Swan, Brewer & Tileston, (Boston)—Worcester's Quarto Dictionary.

Spangler, A. M. (Philadelphia).—Book on the Grape.

Thorburn & Co., J. M. (New York).—Carrot and Water-melon Seeds.

Worthington & Lewis—Small Farm.

Worthington & Lewis—Business Agency.

Wood, Thomas—Chester Hogs.

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